

■ **2184C.VSE** - 41-piece set of 1,000 Volt insulated tools

- For electrical equipment shops, worksites.
 - Supplied in leather case BV.5A.
 - Dimensions: 425 x 215 x 320 mm.
- Weight: 14.130 kg.



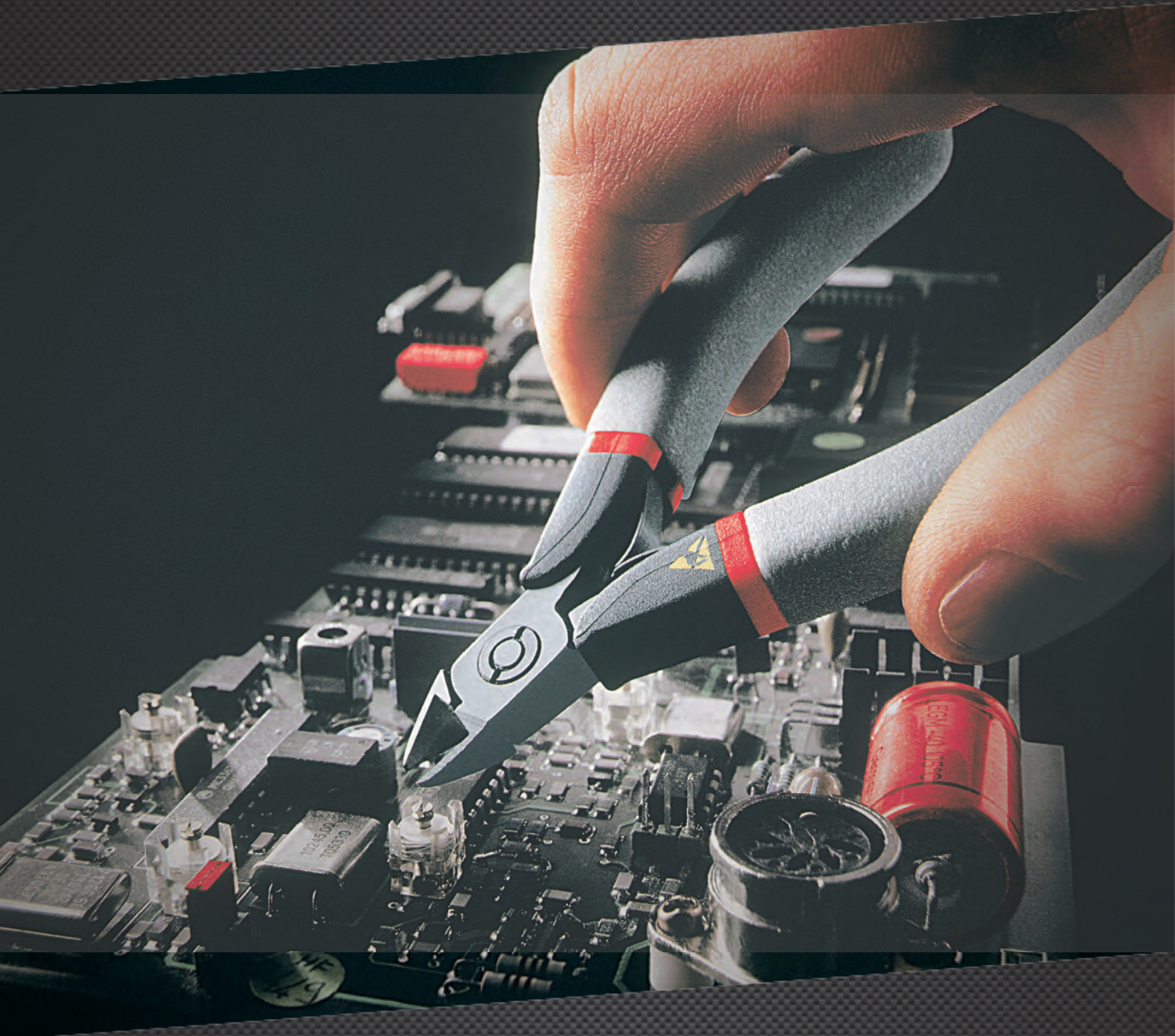
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Item Code	Qty	Set Description
1820.AVSE	1	1,000 Volt insulated knife
187.18AVSE	1	1,000 Volt insulated combination pliers
188.16AVSE	1	1,000 Volt insulated flat nose pliers
189.17AVSE	1	1,000 Volt insulated round nose pliers
190.16AVSE	1	1,000 Volt insulated cutters for hard wire
192.16AVSE	1	1,000 Volt insulated cutters for hard wire
194.17AVSE	1	1,000 Volt insulated strippers
195.20AVSE	1	1,000 Volt insulated long half-round nose pliers
391.16AVSE	1	1,000 Volt insulated copper diagonal cutters 14 mm
412.14AVSE	1	1,000 Volt insulated copper-alu cable cutter 14 mm
414.45AVSE	1	1,000 Volt insulated ratchet cable cutter 45 mm
46.10AVSE	1	1,000 Volt insulated open-end wrench 10 mm
46.12AVSE	1	1,000 Volt insulated open-end wrench 12 mm
46.13AVSE	1	1,000 Volt insulated open-end wrench 13 mm
46.14AVSE	1	1,000 Volt insulated open-end wrench 14 mm
46.17AVSE	1	1,000 Volt insulated open-end wrench 17 mm
46.19AVSE	1	1,000 Volt insulated open-end wrench 19 mm
46.21AVSE	1	1,000 Volt insulated open-end wrench 21 mm
701B	1	Multifunction tester
83.3AVSE	1	1,000 Volt insulated keys 3 mm

Item Code	Qty	Set Description
83.4AVSE	1	1,000 Volt insulated keys 4 mm
83.6AVSE	1	1,000 Volt insulated keys 6 mm
94T.10AVSE	1	1,000 Volt insulated box wrench 10 mm
94T.13AVSE	1	1,000 Volt insulated box wrench 13 mm
94T.8AVSE	1	1,000 Volt insulated box wrench 8 mm
AT10X200VE	1	1,000 Volt insulated slotted head screwdrivers 10x200 mm
AT3.5x100VE	1	1,000 Volt insulated slotted head screwdrivers 3.5x100 mm
AT4X100VE	1	1,000 Volt insulated screwdriver for slotted heads 4x100 mm
AT5.5x150VE	1	1,000 Volt slotted head screwdrivers 5.5x150 mm
AT6.5x150VE	1	1,000 Volt slotted head screwdrivers 6.5x150 mm
AT8X150VE	1	1,000 Volt insulated screwdriver for slotted heads 8x150 mm
ATD1X100VE	1	1,000 Volt screwdrivers for Pozidriv® PZ 1 head
ATD2X125VE	1	1,000 Volt screwdrivers for Pozidriv® PZ 2 head
ATP1X100VE	1	1,000 Volt screwdrivers for Phillips® PH 1 head
ATP2X125VE	1	1,000 Volt screwdrivers for Phillips® PH 2 head
BC.20VSE	1	Insulating mat 1 m x 0.6 m
BC.90VSE	1	Low temperature insulating gloves S9
BV.5A	1	Leather drawer case
DELA.401.00	1	Synthetic folding rule 2 m



ELECTRONICS



ELECTRONIC PLIERS 978

- Diagonal cutting pliers 978
- Slim nose cutting pliers 980
- Angled nose cutting pliers 981
- "End-tip" cutting pliers 981
- Cutting pliers for DIP-CMS components 982
- Flat nose gripping pliers 982
- Half-round nose gripping pliers 984
- Round nose pliers 986
- Pliers set 986



ELECTRONIC PLIERS ANTISTATIC SERIES 987

- Diagonal cutting pliers 987
- Slim nose cutting pliers 989
- Angled nose cutting pliers 990
- Cutting pliers for DIP-CMS components 991
- Gripping pliers 991



MICRO-TECH® SCREWDRIVERS 993

- Screwdrivers 993
- Bits series 0 - 4 mm drive 995
- Micro-Tech® screwdriver kits 996
- Micro-Tech® kit 999
- Clockmakers screwdrivers set 1000



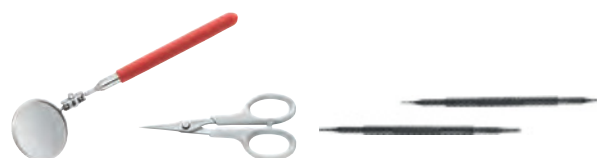
TWEEZERS 1001

- Standard series 1001
- PVC sheath series 1002
- High precision series 1003
- Special tweezers 1004
- Sets of Tweezers 1005



SPECIAL MICRO-TECH® PLIERS 1005

- Circlip® pliers 1005
- Truarc® pliers 1005



VARIOUS TOOLS 1005

- Scissors 1005
- Cutter 1006
- Hacksaw frame 1006
- Various tools 1006



SOLDERING 1013

- Thermoregulated Soldering Units 1013
- Electronic irons 1014
- High power soldering irons 1016
- Soldering accessories 1016
- Gas soldering iron 1017



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MICRO-TECH® CHOOSING MICRO-PLIERS

1 Materials to cut

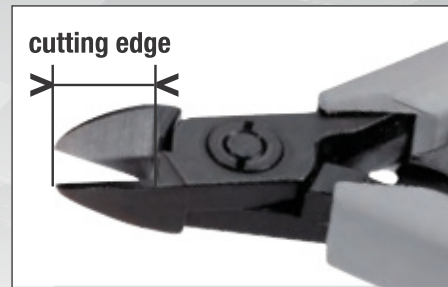
TYPE OF MATERIALS	WIRES	Mechanical strength in N/mm ²	HARDNESS (Hrc)
Copper, Nickel, Aluminium	Soft	220	-
Iron nail or wire, pin	Semi-soft	800	22
Iron spring, cable, hard steel wire or nail	Hard	1675	50
Steel spring	Piano wire	2200	59

2 Dimension and type of wire or component to cut (diameter or thickness)

- Cross-section, thickness.
- Semi-soft: copper/Alu alloy.
- Hard wire: soft steel (30Hrc).
- Piano wire: steel spring (50Hrc).

3 Access:

- Bullet, pointed, angled, end nose for components.
- Flat half round nose.

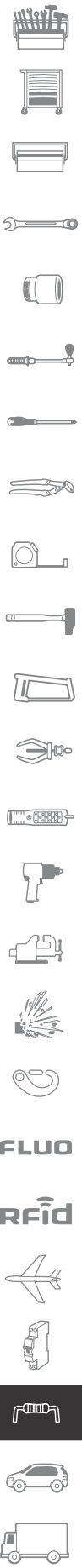
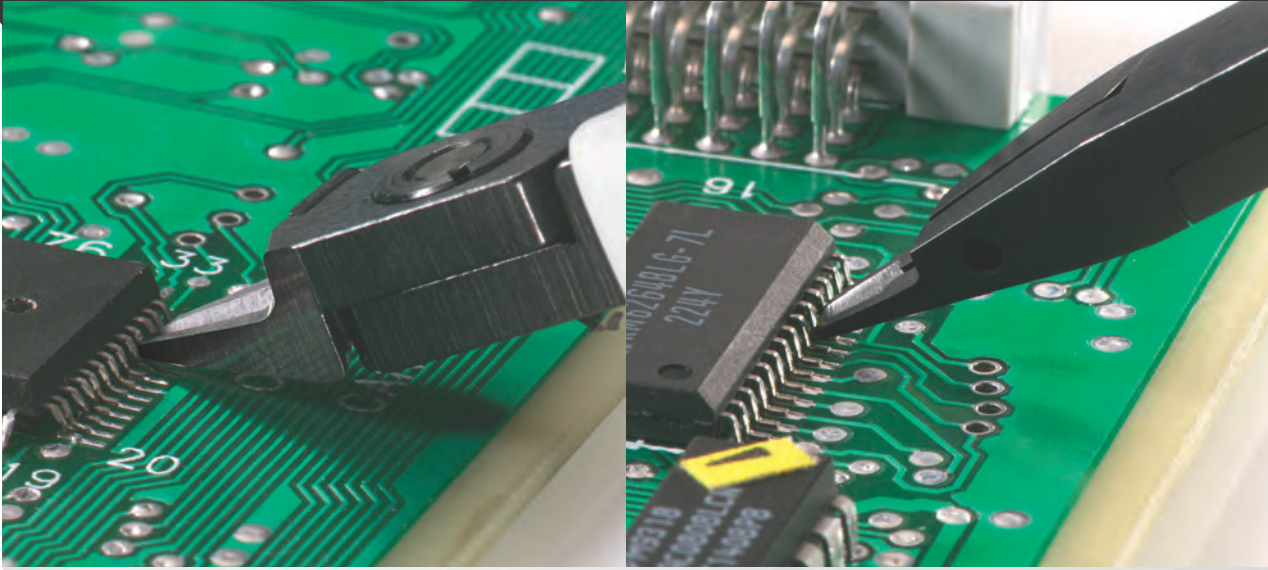










4 Cutting edge design and type of cut

- Axial cut: cutting edges are treated to achieve maximum strength and precision cutting of a wide range of materials, from piano wire to copper.
- Semi-flush cut: suitable for semi-hard wire.
- Flush cut: the most precise shape in terms of cut, but also the most fragile, designed to cut soft materials such as copper.

CUTTING EDGES	PATTERN	FEATURES	WIRE TYPE		OPERATION	APPLICATION
AXIAL CUT		Cutting edges are treated to achieve maximum strength and precision cutting of a wide range of materials, from piano wire to copper.	Cu	●	- Production work - Day-to-day use - Maintenance - Hard materials	- Customer service (hi-fi) - Machine-tools - Automotive - Domestic appliances
			CuNi alloy	●		
			Mild steel 30 HRC	●		
			Hard steel 50 HRC Piano wire	●		
SEMI-FLUSH CUT		Micro-chamfered cutting edges ensure high cutting capacity with clean finish. Precision is maintained throughout a long service life even in intensive use. Suitable for semi-hard wire.	Cu	●	- Clean cut in intensive use - Wiring - Batch electronics - Semi-hard materials	- Computers - Telephone exchanges - Video and laser - Micro-Tech® (hi-fi, labs)
			CuNi alloy	●		
			Mild steel 30 HRC	●		
			Hard steel 50 HRC Piano wire	-		
FLUSH CUT		This range is designed to give a through-cut without crushing the wire. Clean-cut ends allow reliable soldering, without damage to electronic components from arcing. Suitable for soft wire only.	Cu	●	- High-frequency apparatus - High precision equipment - Cut-back before soldering - Electrostatically sensitive components	- Defence - Aerospace - Aviation - Laboratory
			CuNi alloy	●		
			Mild steel 30 HRC	-		
			Hard steel 50 HRC Piano wire	-		

MICRO-TECH® CHOOSING MICRO-PLIERS



NOSE DESIGN		Ø Cu WIRE (mm)		Ø MAX Fe WIRE 30 HRc	Ø MAX PIANO WIRE
		0 0.05 0.1 0.15 0.2	0.1 0.5 1 1.5 2		
Bullet nose: for strength 	405.8MT-405.8E 405.MT-405.E 405.10 MT-405.10E 405.12MT-405.12E 405.E 405.10 RMT-405.10RE	0.2 → 1.0 0.3 → 1.3 0.3 → 1.4 0.4 → 2.0 0.3 → 1.1 0.3 → 1.2	0.5 0.7 0.8 1.0 0.7 0.8	0.8 0.4 0.5 0.6	
Bullet nose: for strength 	406.8-MT-406.8E 406.MT-406.E 435.MT-435.E 415.MT-415.E 406.RMT	0.1 → 1.0 0.1 → 1.3 0.1 → 1.3 0.3 → 2.0 0.1 → 1.1	0.7 1.0 0.7 0.7	-	
Pointed nose: for control 	416.MT-416.E 416.PMT-416.PE 416.12 MT-416.12E 416.RMT	0.1 → 1.0 0.1 → 0.8 0.3 → 1.6 0.1 → 0.9	0.5 0.4 0.7 0.5	-	
Bullet nose: for strength 	407.8 MT-407.8E 407.MT-407.E 425.MT-425.E 426.MT-426.E	0.1 → 0.8 0.1 → 1.3 0.1 → 1.3 0.1 → 1.2	-	-	
Pointed nose: for control 	417.PMT-417.PE	0.1 → 0.8	-	-	
Angled nose for accuracy 	427.MT-427.E 429.MT-429.E	0.2 > 0.6 0.2 → 1.0	-	-	
End nose for reach 	418.MT	0.1 → 0.6	-	-	

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DIAGONAL CUTTING PLIERS

BULLET NOSE PLIERS

- Are stronger than other profiles.
- Have a high cutting capacity and durability that are useful in a wide variety of applications.



AXIAL CUT
Applications, all materials.

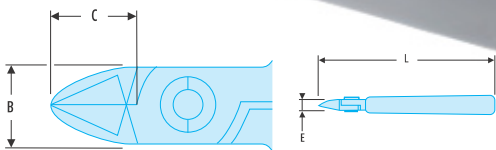
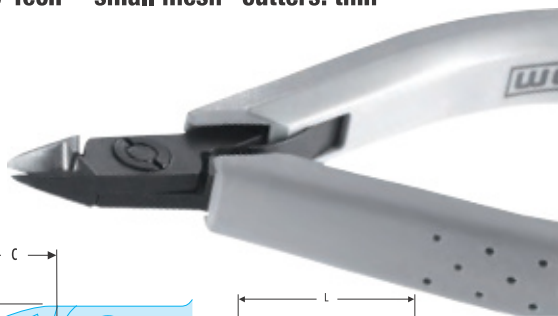


SEMI-FLUSH CUT
Clean, long-life cut in semi-hard materials.



FLUSH CUT
Smooth cut for sound soldered connections.

Micro-Tech® "small mesh" cutters: thin



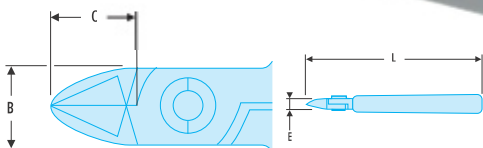
NF ISO 9654, ISO 9654, DIN ISO 9654, ASME B107.500

- These small mesh pliers are ideal for small electronic components.



Model	B [mm]	C [mm]	E [mm]	L [mm]	Cut	Cu - Ni Ø [mm]	Fe 30 HRc diam. [mm]	ΔΔ [g]
405.8MT	8,5	9	6	110		0,2 - 1	0,5	60
406.8MT	8,5	9	6	110		0,1 - 1	-	60
407.8MT	8,5	9	6	110		0,1 - 1	-	60

Micro-Tech® "compact" cutters: handling



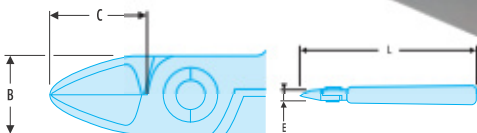
NF ISO 9654, ISO 9654, DIN ISO 9654, ASME B107.500

- These pliers combine cutting performance with accessibility thanks to their new slim diagonal shape.
- Fall prevention models avoid wire ejection. The 405.MT pliers allow to cut piano wire up to 0.4 mm.



Model	B [mm]	C [mm]	E [mm]	L [mm]	Cut	Cu - Ni Ø [mm]	Fe 30 HRc diam. [mm]	Piano Diameter [mm]	Offcut retainer	ΔΔ [g]
405.MT	10,5	9,5	7	110		0,3 - 1,3	0,7	0,4	-	60
406.MT	10,5	9,5	7	110		0,1 - 1,3	0,7	-	-	60
406.RMT	10,5	9,5	7	110		0,1 - 1,1	0,6	-	•	60
407.MT	10,5	9,5	7	110		0,1 - 1,3	-	-	-	60

Micro-Tech® "rugged" cutters: versatility



NF ISO 9654, ISO 9654, DIN ISO 9654, ASME B107.500

- These pliers allow neat cutting of multiple materials: from copper wire to piano wire up to 0.5 mm.
- Fall prevention models avoid wire ejection.



Model	B [mm]	C [mm]	E [mm]	L [mm]	Cut	Cu - Ni Ø [mm]	Fe 30 HRc diam. [mm]	Piano Diameter [mm]	Offcut retainer	ΔΔ [g]
405.10MT	10,5	11,5	7	110		0,3 - 1,4	0,8	0,5	-	60
405.10RMT	10,5	11,5	7	110		0,3 - 1,2	0,7	0,5	•	60

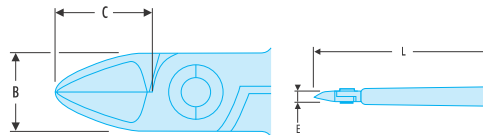
Micro-Tech® "long" cutters: access

NF ISO 9654, ISO 9654, DIN ISO 9654, ASME B107.500

- These pliers allow to go further; up to + 1.5 to 2 mm compared with standard pliers.
- Fall prevention models avoid wire ejection.



Model	B [mm]	C [mm]	E [mm]	L [mm]	Cut	Cu - Ni Ø [mm]	Fe 30 HRc diam. [mm]	ΔΔ [g]
435.MT	10,5	13	7	110		0,1 - 1,3	0,7	60
425.MT	10,5	13	7	110		0,1 - 1,3	-	60



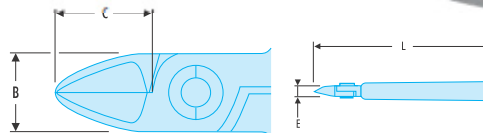
Micro-Tech® "long thin" cutters with clearance

NF ISO 9654, ISO 9654, DIN ISO 9654, ASME B107.500

- These pliers allow to cut behind components and pass under obstacles (coils, resistors...).



Model	B [mm]	C [mm]	E [mm]	L [mm]	L1 [mm]	Cut	Cu - Ni Ø [mm]	Fe 30 HRc diam. [mm]	ΔΔ [g]
426.MT	10,5	13	7	110	5,5		0,1 - 1,2	-	60



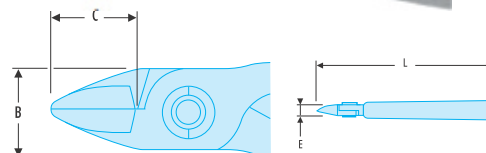
Micro-Tech® "high capacity" cutters: power

NF ISO 9654, ISO 9654, DIN ISO 9654, ASME B107.500

- These pliers are suited to major efforts and repetitive work over a broad range of materials.
- Fall prevention models avoid wire ejection.



Model	B [mm]	C [mm]	E [mm]	L [mm]	L [mm]	Cut	Cu - Ni Ø [mm]	Fe 30 HRc diam. [mm]	Piano Diameter [mm]	ΔΔ [g]
405.12MT	16	16	8	125	125		0,4 - 2,0	1,0	0,8	95
415.MT	16	16	8	125	125		0,3 - 2,0	0,9	-	95



SLIM NOSE CUTTING PLIERS

POINTED-NOSE PLIERS

- Are ideal where clearance is restricted and allow better visibility of the wire being cut.



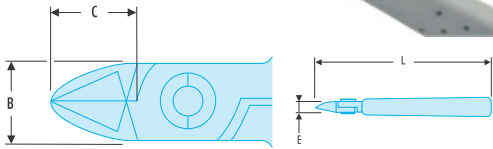
SEMI-FLUSH CUT
Clean, long-life cut in semi-hard materials.



FLUSH CUT
Smooth cut for sound soldered connections.



Micro-Tech® "machined" cutters



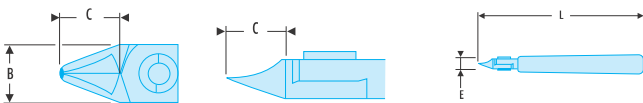
NF ISO 9654, ISO 9654, DIN ISO 9654, ASME B107.500

- Compact noses for difficult access.
- Fall prevention models avoid wire ejection.



	B [mm]	C [mm]	E [mm]	L [mm]	Cut	Cu - Ni Ø [mm]	Fe 30 HRc diam. [mm]	Offcut retainer	ΔΔ [g]
416.MT	10,5	10,5	7	110		0,1 - 1,0	0,5	-	60
416.RMT	10,5	10,5	7	110		0,1 - 0,9	0,5	•	60

Micro-Tech® "thin nose tip" cutters: handling



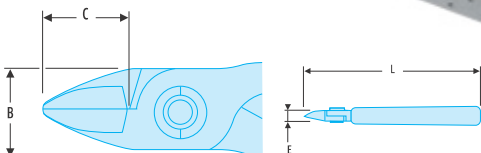
NF ISO 9654, ISO 9654, DIN ISO 9654, ASME B107.500

- These pliers pass under all obstacles of the PCB and provide better visibility.



	B [mm]	C [mm]	C1 [mm]	E [mm]	L [mm]	Cut	Cu - Ni Ø [mm]	Fe 30 HRc diam. [mm]	ΔΔ [g]
416.PMT	10,5	10,5	9,5	7	110		0,1 - 0,8	0,4	60
417.PMT	10,5	10,5	9,5	7	110		0,1 - 0,8	-	60

Micro-Tech® "high capacity machined" cutters



NF ISO 9654, ISO 9654, DIN ISO 9654, ASME B107.500

- Broadly dimensioned for large series work.
- Semi-flush cutting.



	B [mm]	C [mm]	E [mm]	L [mm]	Cu - Ni Ø [mm]	Fe 30 HRc diam. [mm]	ΔΔ [g]
416.12MT	16	16	8	125	0,3 - 1,6	0,7	95

ANGLED NOSE CUTTING PLIERS

ANGLED-NOSE CUTTING PLIERS

- Ideal for use on printed circuits, electronic modules and hybrid circuits.
- Designed for cutting right up against the board in the smallest of spaces.
- Flush cutting edges.



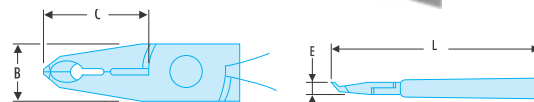
FLUSH CUT
Smooth cut for sound soldered connections.



Micro-Tech® 30° nose cutters

NF ISO 9654, ISO 9654, DIN ISO 9654, ASME B107.500

- Cutting edges angled at 30° with rear clearance.
- Cut: flush.

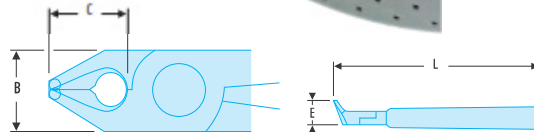
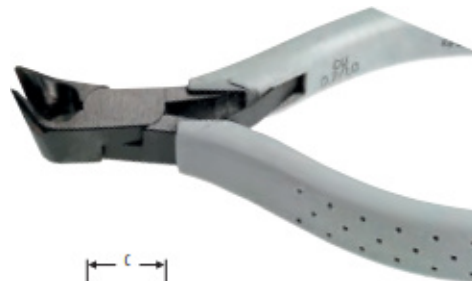


	B [mm]	C [mm]	E [mm]	L [mm]	Cu - Ni Ø [mm]	ΔΔ [g]
427.MT	11	23	7	120	0,2 - 0,6	65

Micro-Tech® 70° nose cutters

NF ISO 9654, ISO 9654, DIN ISO 9654, ASME B107.500

- Model with wide cutting edges angled at 70° broadly cleared.
- Cut: flush.



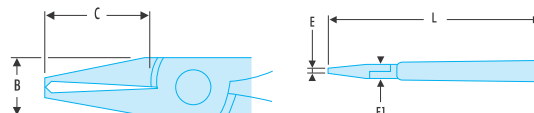
	B [mm]	C [mm]	E [mm]	L [mm]	Cu - Ni Ø [mm]	ΔΔ [g]
429.MT	11,5	12	7	110	0,2 - 1,0	60

"END-TIP" CUTTING PLIERS

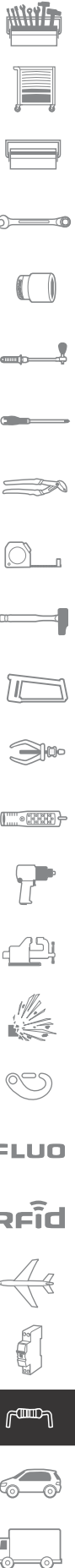
Micro-Tech® "tip" cutters

NF ISO 9654, ISO 9654, DIN ISO 9654, ASME B107.500

- Long and narrow nose for vertical access cut.
- Cut: flush.

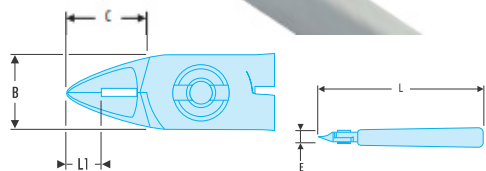


	B [mm]	C [mm]	E [mm]	L [mm]	Cu - Ni Ø [mm]	ΔΔ [g]
418.MT	10,5	21	2,7	120	0,1 - 0,6	75



CUTTING PLIERS FOR DIP-CMS COMPONENTS

Micro-Tech® diagonal cutter for DIP - CMS components



NF ISO 9654, ISO 9654, DIN ISO 9654, ASME B107.500

- These pliers provide access between two legs of "DIP" components with a 0.65 mm gap. As they are extremely thin, these pliers can be used only for this function.
- Cut: flush.



🔪	B [mm]	C [mm]	E [mm]	L [m]	L [mm]	L1 [mm]	Cu - Ni Ø [mm]	ΔΔ [g]
417.SPMT	10,5	10,5	7	110	110	6,5	0,1 - 0,6	60

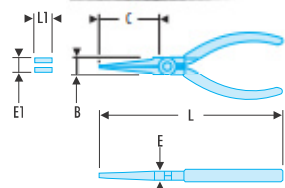
FLAT-NOSE PLIERS

- These pliers serve all professional needs in laboratory, production and maintenance applications.
- The rectangular-section jaws are smooth with contoured inside edges to avoid damage to components.
- Matt black non-reflective finish.
- Leaf spring.



FLAT NOSE GRIPPING PLIERS

Micro-Tech® extra-long nose gripper pliers



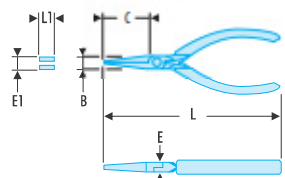
NF ISO 9655, ISO 9655, DIN ISO 9655, ASME B107.500

- For powerful loads.



🔪	B [mm]	C [mm]	E [mm]	E1 [mm]	L [mm]	L1 [mm]	ΔΔ [g]
401.MT	14	48	8	1	160	5	80

Micro-Tech® long and rigid nose grippers



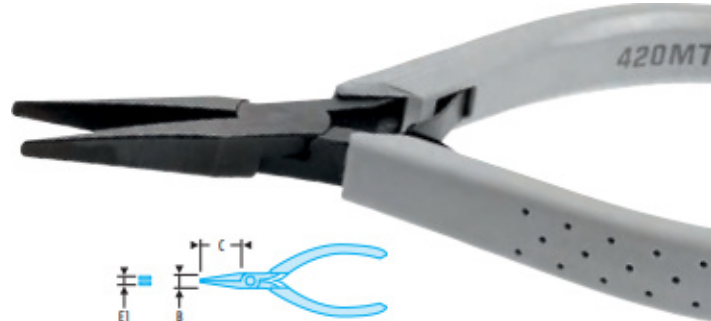
NF ISO 9655, ISO 9655, DIN ISO 9655, ASME B107.500



🔪	B [mm]	C [mm]	E [mm]	E1 [mm]	L [mm]	L1 [mm]	ΔΔ [g]
421.MT	11	33	7	1	130	5	70

Micro-Tech® shaping gripper pliers

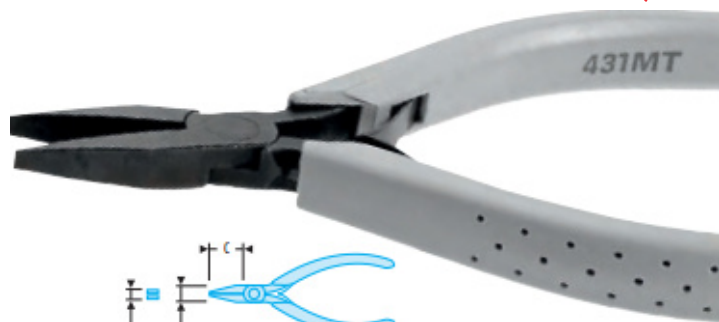
NF ISO 9655, ISO 9655, DIN ISO 9655, ASME B107.500
 • Very thin nose.



Icon	B [mm]	C [mm]	E [mm]	E1 [mm]	L [mm]	ΔΔ [g]
420.MT	9	21	7	1	125	60

Micro-Tech® short nose gripper pliers

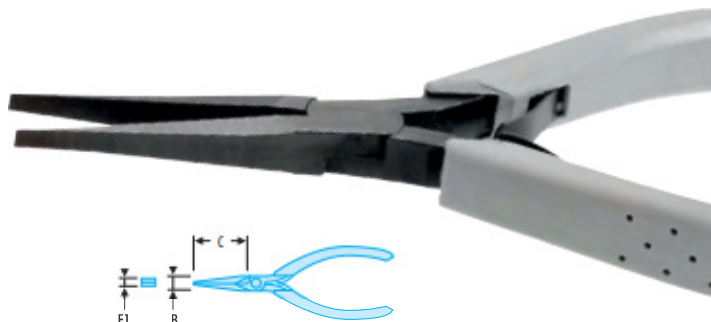
NF ISO 9655, ISO 9655, DIN ISO 9655, ASME B107.500
 • Narrow mesh, for high precision work.



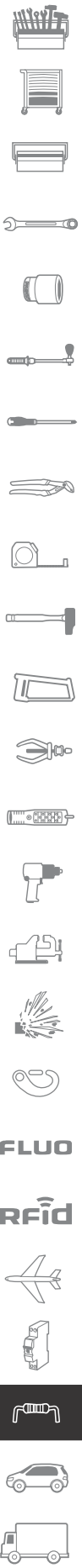
Icon	B [mm]	C [mm]	E [mm]	E1 [mm]	L [mm]	ΔΔ [g]
431.MT	9	20	6	1	135	55

Micro-Tech® thin nose grippers

NF ISO 9655, ISO 9655, DIN ISO 9655, ASME B107.500
 • Narrow mesh, for high precision work.



Icon	B [mm]	C [mm]	E [mm]	E1 [mm]	L [mm]	ΔΔ [g]
431.LMT	9	35	6	1	135	80



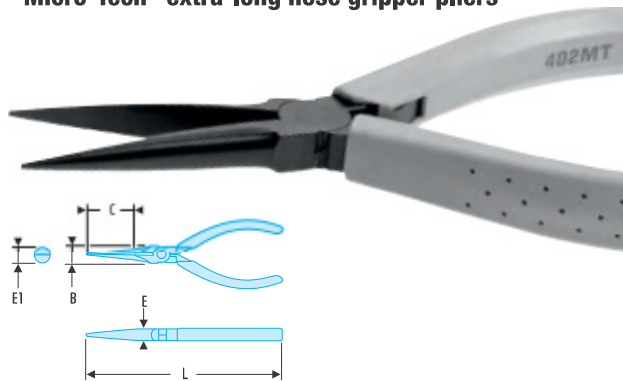
HALF-ROUND NOSE GRIPPING PLIERS

HALF-ROUND NOSE PLIERS

- These pliers serve all professional needs in laboratory, production and maintenance applications.
- The half-round jaws are smooth with contoured inside edges to avoid damage to components.
- Matt black non-reflective finish.
- Leaf spring for easy opening.



Micro-Tech® extra-long nose gripper pliers

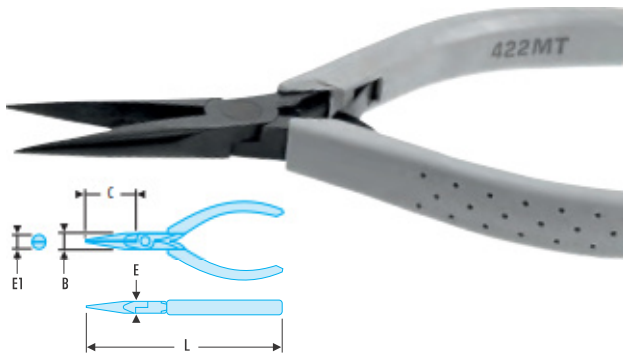


NF ISO 9655, ISO 9655, DIN ISO 9655, ASME B107.500
 • For powerful loads.



Model	B [mm]	C [mm]	E [mm]	E1 [mm]	L [mm]	ΔΔ [g]
402.MT	14	48	8	1,5	160	76

Micro-Tech® long and rigid nose grippers

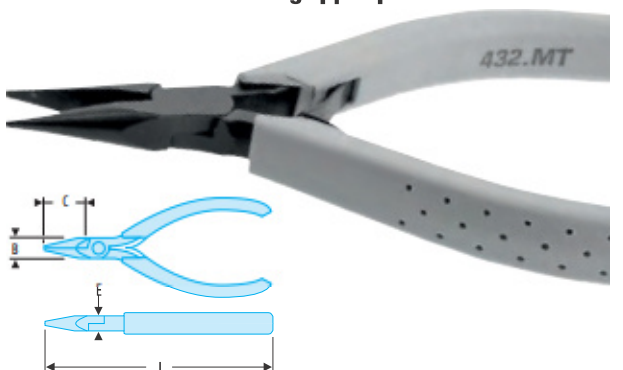


NF ISO 9655, ISO 9655, DIN ISO 9655, ASME B107.500



Model	B [mm]	C [mm]	E [mm]	E1 [mm]	L [mm]	ΔΔ [g]
422.MT	11	44	7	3,8	130	70

Micro-Tech® short nose gripper pliers



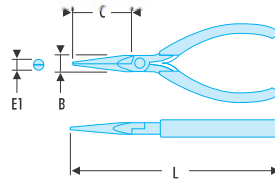
NF ISO 9655, ISO 9655, DIN ISO 9655, ASME B107.500
 • Fine mesh.



Model	B [mm]	C [mm]	E [mm]	L [mm]	L [mm]	ΔΔ [g]
432.MT	9	26	6	120	120	55

Micro-Tech® thin nose grippers

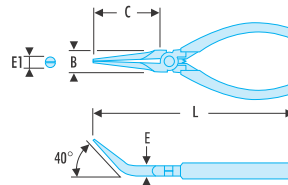
NF ISO 9655, ISO 9655, DIN ISO 9655, ASME B107.500
 • Fine mesh, for high precision work.



Icon	B [mm]	C [mm]	E1 [mm]	L [mm]	ΔΔ [g]
432.LMT	9	35	1,6	140	65

Micro-Tech® extra-long angled nose grippers

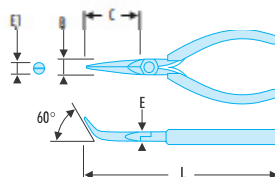
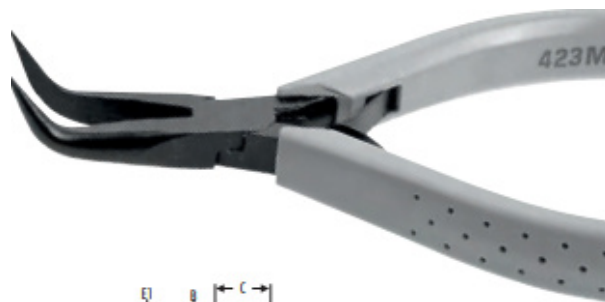
ASME B107.500
 • For powerful loads.



Icon	B [mm]	C [mm]	L [mm]	ΔΔ [g]
403.MT	14	45	155	75

Micro-Tech® 60° angled rigid nose grippers

NF ISO 9655, ISO 9655, DIN ISO 9655, ASME B107.500

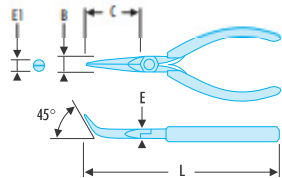


Icon	B [mm]	C [mm]	E [mm]	E1 [mm]	L [mm]	ΔΔ [g]
423.MT	11	25	7	1,4	125	70



HALF-ROUND NOSE GRIPPING PLIERS

Micro-Tech® 45° angled thin nose grippers



NF ISO 9655, ISO 9655, DIN ISO 9655, ASME B107.500

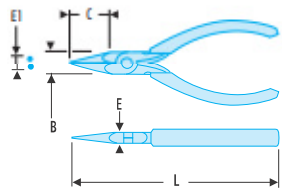
- Thin angled for better accessibility and control.



ED	B [mm]	C [mm]	E [mm]	E1 [mm]	L [mm]	ΔΔ [g]
433.LMT	9	35	6	1,6	135	75

ROUND NOSE PLIERS

Micro-Tech® short and rigid nose grippers



NF ISO 9655, ISO 9655, DIN ISO 9655, ASME B107.500



ED	B [mm]	C [mm]	E [mm]	E1 [mm]	L [mm]	ΔΔ [g]
424.MT	11	22	7	2	120	55

PLIERS SET

Micro-Tech® 6-pliers set



Contains:

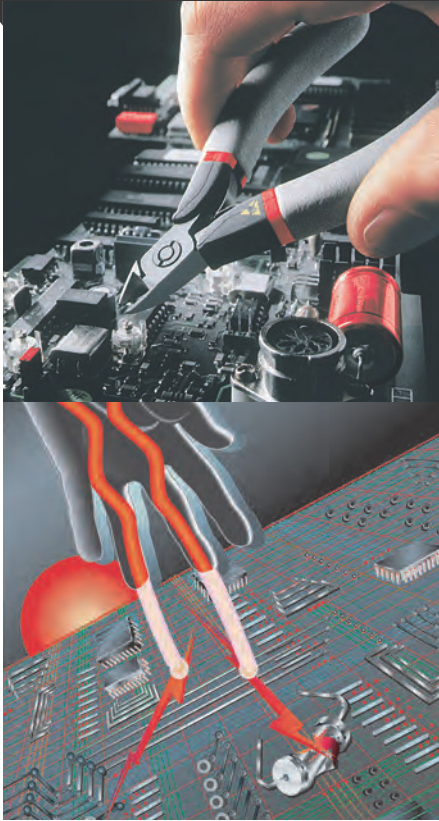
- 405.MT - 405.12MT - 406.MT - 406.8MT - 402.MT - 433.LMT.
- Heat-formed tray PL.612.



ED	l [mm]	L [mm]	ΔΔ [g]
MOD.MT1	175	418	650

DIAGONAL CUTTING PLIERS

ANTI-STATIC SERIES ELECTRONIC PLIERS



A danger for electronic components!

As they become smaller and more sophisticated, electronic circuits are increasingly at risk from static electricity - especially when the charge can build up to several thousand volts.

Controlling electrostatic build-up (ESD) makes economic sense.

While the cost of a faulty component at acceptance-test stage is relatively small, it starts to increase once the component has reached the board, and escalates markedly once a fault involves sending back a complete unit. But the most important benefit in controlling static electricity is customer satisfaction. FACOM solves the problem with an antistatic range to EN 61340-5-1 & 2. For safe work on printed circuits, all tools and equipment used should be interlinked and effectively connected to earth. Measurements and tests on antistatic screwdrivers and electronics pliers have been carried out in laboratories approved by the electrical industry.

SAFETY FIRST

Never use antistatic tools when working on live components.



ESD BULLET-NOSE CUTTING PLIERS

- Are stronger than other profiles.
- Have a high cutting capacity and durability that are useful in a wide variety of applications.



AXIAL CUT
All applications, all materials.



SEMI-FLUSH CUT
Clean, long-life cut in semi-hard materials.



FLUSH CUT
Smooth cut for sound soldered connections.



ESD "small mesh" cutters: thin

NF ISO 9654, ISO 9654, DIN ISO 9654, ASME B107.500

- Protection of electronic components from risks of electrostatic discharge (ESD).
- These small mesh pliers are ideal for small components.
- The flush cutting model was extended to optimise access.

Model	B [mm]	C [mm]	E [mm]	L [mm]	Cut	Cu - Ni Ø [mm]	Fe 30 HRC diam. [mm]	ΔΔ [g]
405.8E	8,5	9	6	110		0,2 - 1	0,5	55
406.8E	8,5	9	6	110		0,1 - 1	-	55
407.8E	8,5	9	6	110		0,1 - 1	-	55

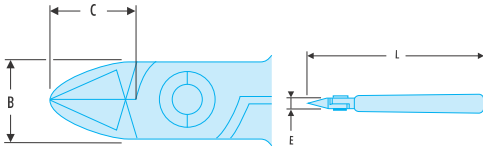


FLUO

RFid



ESD "compact" cutters: handling



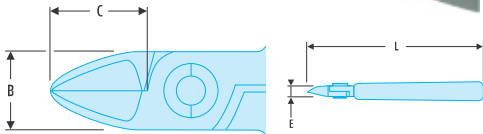
NF ISO 9654, ISO 9654, DIN ISO 9654, ASME B107.500

- Protection of electronic components from risks of electrostatic discharge (ESD).
- These pliers combine cutting performance with handling thanks to their new slim diagonal shape.
- The 405.MT pliers allow to cut piano wire up to 0,4 mm.



Model	B [mm]	C [mm]	E [mm]	L [mm]	Cut	Cu - Ni Ø [mm]	Fe 30 HRc diam. [mm]	Piano Diameter [mm]	ΔΔ [g]
405.E	10,5	9,5	7	110	∧	0,3 - 1,3	0,7	0,4	65
406.E	10,5	9,5	7	110	∧	0,1 - 1,3	0,7	-	65
407.E	10,5	9,5	7	110	∧	0,1 - 1,3	-	-	65

ESD "rugged" cutters: versatility



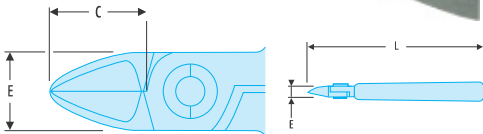
NF ISO 9654, ISO 9654, DIN ISO 9654, ASME B107.500

- Protection of electronic components from risks of electrostatic discharge (ESD).
- These pliers allow neat cutting of multiple materials: from copper wire to piano wire up to 0.5 mm.
- Fall prevention models avoid wire ejection.



Model	B [mm]	C [mm]	E [mm]	L [mm]	Cut	Cu - Ni Ø [mm]	Fe 30 HRc diam. [mm]	Piano Diameter [mm]	Offcut retainer	ΔΔ [g]
405.10E	10,5	11,5	7	110	∧	0,3 - 1,4	0,8	0,5	-	65
405.10RE	10,5	11,5	7	110	∧	0,3 - 1,2	0,7	0,5	•	65

ESD "extended" cutters: access



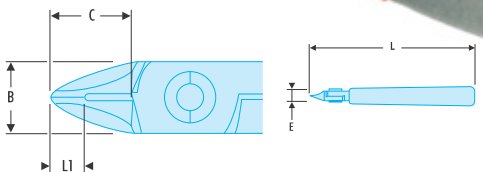
NF ISO 9654, ISO 9654, DIN ISO 9654, ASME B107.500

- Protection of electronic components from risks of electrostatic discharge (ESD).
- These pliers allow to go further; up to + 1.5 to 2 mm compared with standard pliers.
- Fall prevention models avoid wire ejection.



Model	B [mm]	C [mm]	E [mm]	L [mm]	Cut	Cu - Ni Ø [mm]	Fe 30 HRc diam. [mm]	Offcut retainer	ΔΔ [g]
425.E	10,5	13	7	110	∧	0,1 - 1,3	-	-	65
435.E	10,5	13	7	110	∧	0,1 - 1,3	0,7	-	65
435.RE	10,5	13	7	110	∧	0,1 - 1,2	0,7	•	65

ESD "long thin" cutters with clearance



NF ISO 9654, ISO 9654, DIN ISO 9654, ASME B107.500

- Protection of electronic components from risks of electrostatic discharge (ESD).
- These pliers allow to cut behind components and pass under obstacles (coils, resistors...).



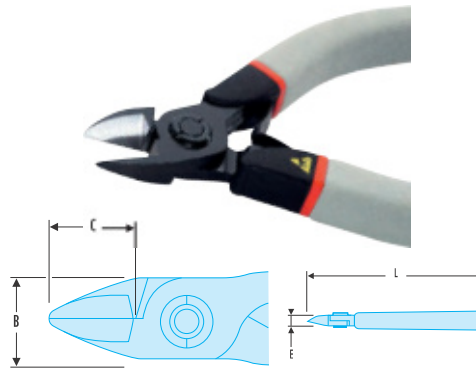
Model	B [mm]	C [mm]	E [mm]	L1 [mm]	L [mm]	Cut	Cu - Ni Ø [mm]	Fe 30 HRc diam. [mm]	ΔΔ [g]
426.E	10,5	13	7	5,5	110	∧	0,1 - 1,2	-	65

ESD "high capacity" cutters:

NF ISO 9654, ISO 9654, DIN ISO 9654, ASME B107.500

- Protection of electronic components from risks of electrostatic discharge (ESD).
- These pliers are suited to major efforts and repetitive work over a broad range of materials.
- Fall prevention models avoid wire ejection.

ESD	B [mm]	C [mm]	E [mm]	L [mm]	Cut	Cu - Ni Ø [mm]	Fe 30 HRc diam. [mm]	ΔΔ [g]
405.12E	16	16	8	130		0,4 - 2,0	1,0	105
415.E	16	16	8	130		0,3 - 2,0	1,0	105



ESD POINTED-NOSE PLIERS

- Are ideal where clearance is restricted and allow better visibility of the wire being cut.



SEMI-FLUSH CUT
Clean, long-life cut in semi-hard materials.



FLUSH CUT
Smooth cut for sound soldered connections.



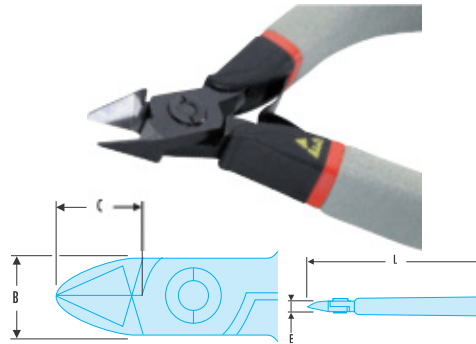
SLIM NOSE CUTTING PLIERS

ESD "tip" cutters

NF ISO 9654, ISO 9654, DIN ISO 9654, ASME B107.500

- Protection of electronic components from risks of electrostatic discharge (ESD).
- Compact noses for difficult access.

ESD	B [mm]	C [mm]	E [mm]	L [mm]	Cut	Cu - Ni Ø [mm]	Fe 30 HRc diam. [mm]	ΔΔ [g]
416.E	10,5	10,5	7	110		0,1 - 1,0	0,5	65

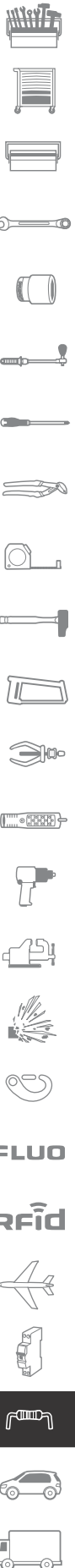
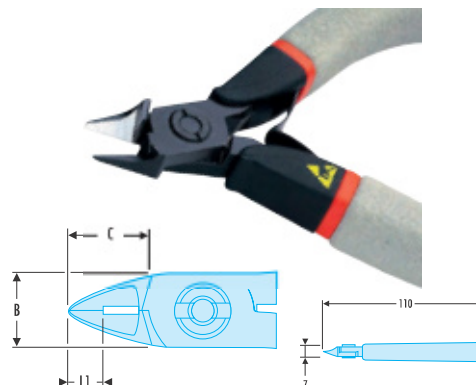


ESD thin nose "machined" cutters: handling

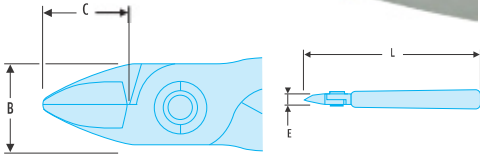
NF ISO 9654, ISO 9654, DIN ISO 9654, ASME B107.500

- Protection of electronic components from risks of electrostatic discharge (ESD).
- These pliers pass under all obstacles of the PCB and provide better visibility.

ESD	B [mm]	C [mm]	E [mm]	L [mm]	L1 [mm]	Cut	Cu - Ni Ø [mm]	Fe 30 HRc diam. [mm]	ΔΔ [g]
416.PE	10,5	10,5	7	110	6,5		0,1 - 0,8	0,4	65
417.PE	10,5	10,5	7	110	6,5		0,1 - 0,8	-	65



ESD "high capacity machined" cutters



NF ISO 9654, ISO 9654, DIN ISO 9654, ASME B107.500

- Protection of electronic components from risks of electrostatic discharge (ESD).
- Broadly dimensioned for large series work.



	B [mm]	C [mm]	E [mm]	L [mm]	Cut	Cu - Ni Ø [mm]	Fe 30 HRc diam. [mm]	ΔΔ [g]
416.12E	16	16	8	130		0,3 - 1,6	0,7	105

ESD ANGLED-NOSE PLIERS

- Ideal for use on printed circuits, electronic modules and hybrid circuits.
- Designed for cutting right up against the board in the minutest spaces.
- Flush cutting edges.

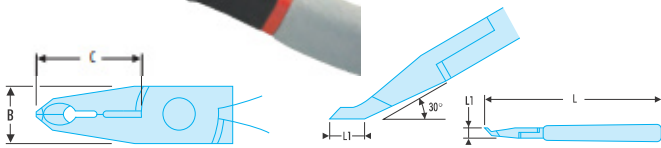


FLUSH CUT
Smooth cut for sound soldered connections.



ANGLED NOSE CUTTING PLIERS

ESD 30° angled cutters



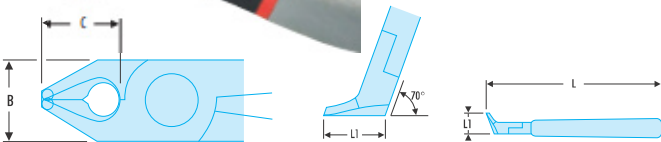
NF ISO 9654, ISO 9654, DIN ISO 9654, ASME B107.500

- Protection of electronic components from risks of electrostatic discharge (ESD).
- Cutting edges angled at 30° with rear clearance.



	B [mm]	C [mm]	E [mm]	L [mm]	L1 [mm]	Cut	Cu - Ni Ø [mm]	ΔΔ [g]
427.E	11	23	7	120	6		0,2 - 0,6	65

ESD 70° "angled" cutters



NF ISO 9654, ISO 9654, DIN ISO 9654, ASME B107.500

- Protection of electronic components from risks of electrostatic discharge (ESD).
- Cutting edges angled at 70° with rear clearance.



	B [mm]	C [mm]	E [mm]	L [mm]	L1 [mm]	Cut	Cu - Ni Ø [mm]	ΔΔ [g]
429.E	11,5	12	7	110	12		0,2 - 1,0	66

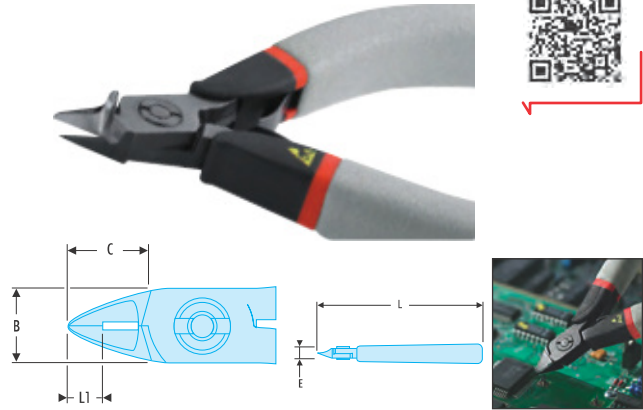
CUTTING PLIERS FOR DIP-CMS COMPONENTS

■ **ESD diagonal cutters for DIP-CMS components**

NF ISO 9654, ISO 9654, DIN ISO 9654, ASME B107.500

- Protection of electronic components from risks of electrostatic discharge (ESD).
- These pliers provide access between two legs of "DIP" components with a 0.65 mm gap. Due to their shape, these pliers can be used only in this configuration.

ESD	B [mm]	C [mm]	E [mm]	L [mm]	L1 [mm]	Cut	Cu - Ni Ø [mm]	ΔΔ [g]
417.SPE	10,5	10,5	7	110	6,5		0,1 - 0,7	60



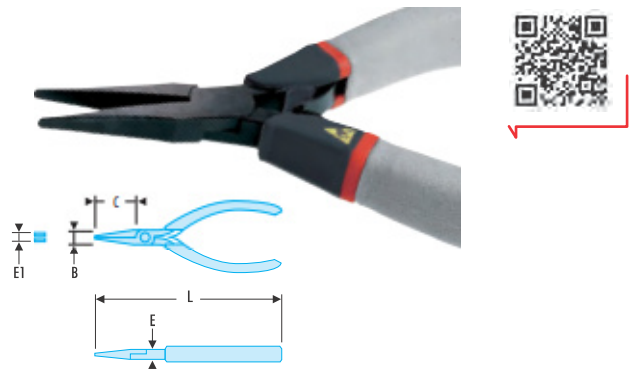
GRIPPING PLIERS

■ **ESD flat nose shaping cutters**

NF ISO 9655, ISO 9655, DIN ISO 9655, ASME B107.500

- Protection of electronic components from risks of electrostatic discharge (ESD).
- Very thin nose.

ESD	B [mm]	C [mm]	E [mm]	E1 [mm]	L [mm]	ΔΔ [g]
420.E	9	21	7	1	125	65

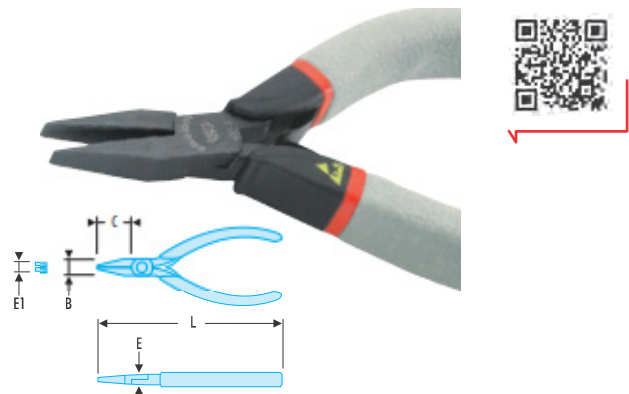


■ **ESD short flat nose cutters**

NF ISO 9655, ISO 9655, DIN ISO 9655, ASME B107.500

- Protection of electronic components from risks of electrostatic discharge (ESD).
- Narrow head, for high precision work.

ESD	B [mm]	C [mm]	E [mm]	E1 [mm]	L [mm]	ΔΔ [g]
431.E	9	20	6	1	135	75

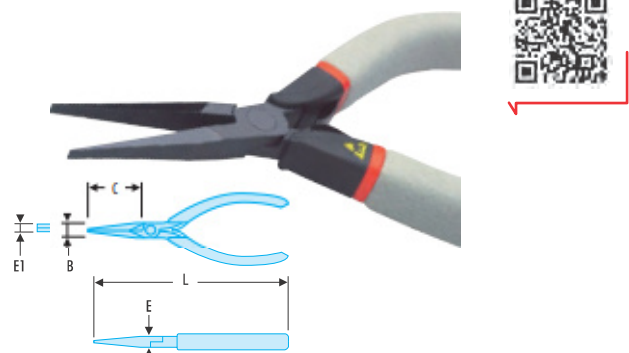


■ **ESD thin flat-nose pliers**

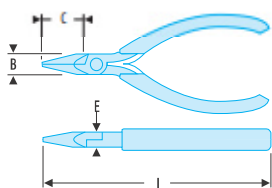
NF ISO 9655, ISO 9655, DIN ISO 9655, ASME B107.500

- Protection of electronic components from risks of electrostatic discharge (ESD).
- Narrow head, for high precision work.

ESD	B [mm]	C [mm]	E [mm]	E1 [mm]	L [mm]	ΔΔ [g]
431.LE	9	35	6	1	135	75



ESD half-round nose cutters



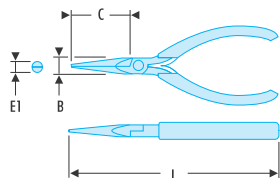
NF ISO 9655, ISO 9655, DIN ISO 9655, ASME B107.500

- Protection of electronic components from risks of electrostatic discharge (ESD).
- Fine mesh.



ESD	B [mm]	C [mm]	E [mm]	L [mm]	$\Delta\Delta$ [g]
432.E	9	26	6	120	70

ESD half-round thin nose cutters



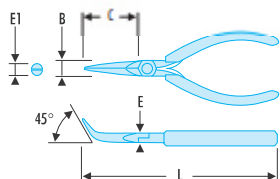
NF ISO 9655, ISO 9655, DIN ISO 9655, ASME B107.500

- Protection of electronic components from risks of electrostatic discharge (ESD).
- Narrow mesh, for high precision work.



ESD	B [mm]	C [mm]	E1 [mm]	L [mm]	$\Delta\Delta$ [g]
432.LE	9	35	1,6	140	70

ESD half-round angled nose cutters



NF ISO 9655, ISO 9655, DIN ISO 9655, ASME B107.500

- Protection of electronic components from risks of electrostatic discharge (ESD).
- 45° angled nose.
- Narrow mesh, for high precision work.



ESD	B [mm]	C [mm]	E [mm]	E1 [mm]	L [mm]	$\Delta\Delta$ [g]
433.LE	9	35	6	1,6	135	70

SCREWDRIVERS

MICRO-TECH® SCREWDRIVERS

1 Efficient

- The screwdriver end is designed to provide an effective pressure area in each of the three micro-engineering screwdriver positions. This end also rotates to optimise the turning motion.

2 - 3 Powerful and accurate

- The body comprises a gripping surface designed for optimum torque transmission with handling accuracy. The handle is shaped so fingers can naturally grip the specially designed handle for total tool control.

4 Quick and easy to use

- The ribbed cone provides maximum grip for fast pre-tightening. Blade clearance gives a clear view of the job in hand.

5 A large choice of blades

- A selection of over 50 high-precision steel or ceramic fixed or replaceable blades.

6 Easy identification

- Colour-coded by size for instant selection of the correct tool.

Finger-tip grip area

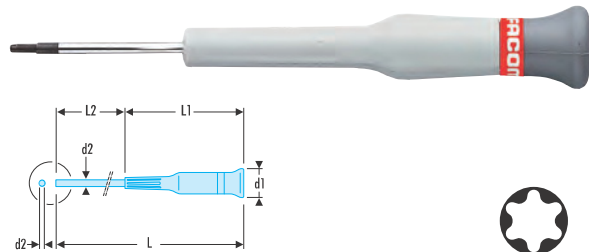
Watch makers grip area

Full palm grip area

■ AEX - Micro-Tech® screwdriver for Torx® screws

- Chromed blade, hardened tip.

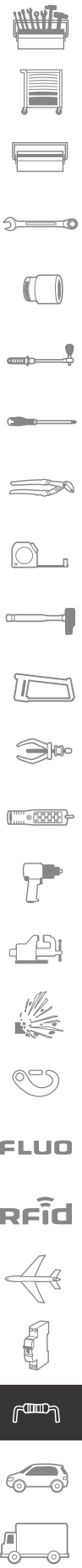
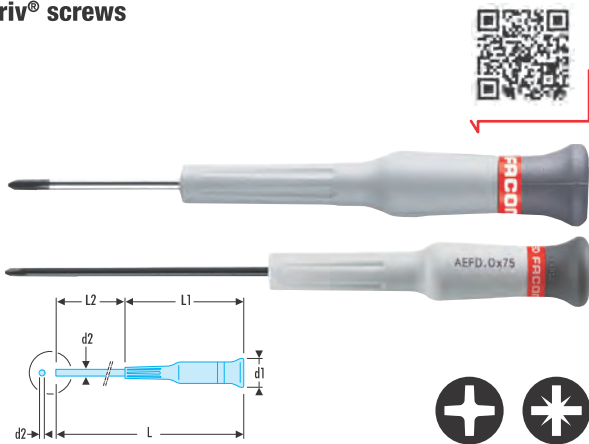
➤	d1 x L1 [mm]	d2 x L2 [mm]	L [mm]	Torx [No]	Colour	ΔΔ [g]
AEX.5X35	17 x 82	2,0 x 35	117	T5	Green	13
AEX.6X35	17 x 82	2,0 x 35	117	T6	Indigo	13
AEX.7X35	17 x 82	2,5 x 35	117	T7	Blue	13
AEX.8X75	21 x 93	2,5 x 75	168	T8	Pink	31
AEX.9X75	21 x 93	3,0 x 75	168	T9	Purple	33
AEX.10X75	21 x 93	3,0 x 75	168	T10	Plum	32
AEX.15X75	21 x 93	3,5 x 75	168	T15	Brown	35
AEX.20X75	21 x 93	4,0 x 75	168	T20	Grey	41



■ AEFP - AEFD Micro-Tech® screwdriver for Phillips® and Pozidriv® screws

- AEFP presentation: chromed blade, hardened tip.
- AEFD presentation: hardened blade.

➤	d1 x L1 [mm]	d2 x L2 [mm]	L [mm]	Phillips [No]	Pozidriv [No]	Colour	ΔΔ [g]
AEFP.000X35	17 x 82	2 x 35	117	PH.000	-	Pink	11
AEFP.00X35	17 x 82	2,5 x 35	117	PH.00	-	Purple	12
AEFP.00X75	17 x 82	2,5 x 75	157	PH.00	-	Purple	15
AEFP.0X35	17 x 82	3,0 x 35	117	PH.0	-	Plum	13
AEFP.0X75	21 x 93	3,0 x 75	168	PH.0	-	Plum	32
AEFP.1X75	21 x 93	4,0 x 75	168	PH.1	-	Brown	37
AEFD.0X35	17 x 82	3,0 x 35	117	-	PZ.0	Orange	13
AEFD.0X75	21 x 93	3,0 x 75	168	-	PZ.0	Orange	32
AEFD.1X75	21 x 93	4,0 x 75	168	-	PZ.1	Brown	37

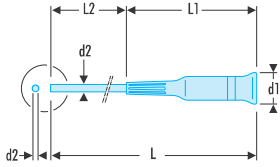


SCREWDRIVERS

■ AEF - Micro-Tech® screwdriver for slotted head screws



- Swivel head.
- Chromed blade, hardened tip.



REF	d1 x L1 [mm]	d2 x L2 [mm]	L [mm]	Colour	ΔΔ [g]
AEF.1,5X35	17 x 82	1,5 x 35	117	Yellow	12
AEF.1,8X35	17 x 82	1,8 x 35	117	Green	13
AEF.2X35	17 x 82	2,0 x 35	117	Indigo	13
AEF.2X75	17 x 82	2,0 x 75	157	Indigo	14
AEF.2,5X35	17 x 82	2,5 x 35	117	Blue	13
AEF.2,5X75	17 x 82	2,5 x 75	157	Blue	14
AEF.3X75	21 x 93	3,0 x 75	168	Pink	21
AEF.3,5X75	21 x 93	3,5 x 75	168	Purple	25
AEF.4X75	21 x 93	4,0 x 75	168	Plum	26

■ 84E - Micro-Tech® screwdriver for male hex screws



- Hardened blade.

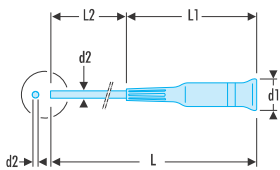


REF	L [mm]	Colour	Hex Size [mm]	ΔΔ [g]
84E.0,9X35	117	Red	0,9	14
84E.1,3X35	117	Orange	1,3	15
84E.1,5X35	117	Yellow	1,5	15
84E.1,5X75	157	Yellow	1,5	15
84E.2X75	168	Green	2,0	30
84E.2,5X75	168	Indigo	2,5	32

■ AEF - AEP - Micro-Tech® replaceable blade screwdriver



- Swivel head.
- Chromed blade, hardened tip.

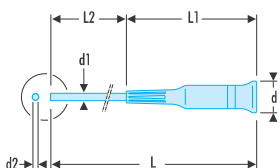


REF	d1 x L1 [mm]	d2 x L2 [mm]	L [mm]	Colour	ΔΔ [g]
AEF.1X35	17 x 82	1,0 x 35	117	Red	11
AEF.1,2X35	17 x 82	1,2 x 35	117	Orange	11

■ Micro-Tech® bit holder screwdriver for hex screws 4 mm



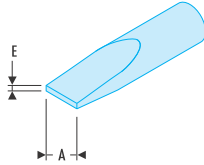
- For bits series 0 - 4 mm drive.
- Hardened blade.



REF	A [mm]	d [mm]	d1 [mm]	L [mm]	L1 [mm]	L2 [mm]	ΔΔ [g]
AEM.M	4	21	6	167	93	72	50

BITS SERIES 0 - 4 MM DRIVE

■ ES.0 - Screwing bits series 0-drive 4 mm for slotted head screws



NF ISO 2351-1, NF ISO 1173, ISO 2351-1, ISO 1173, DIN ISO 2351-1

ES	E [mm]	E x l [mm]	L [mm]	A fente [No]	ΔΔ [g]
ES.002	0,4	0,4 x 2,0	28	2,0	3
ES.002,5	0,4	0,4 x 2,5	28	2,5	3
ES.003	0,5	0,5 x 3,0	28	3,0	3
ES.004	0,5	0,5 x 4,0	28	4,0	3
ES.004,5	0,6	0,6 x 4,5	28	4,5	3

■ EP.0 - Screwing bits series 0-drive 4 mm for Phillips® screws



NF ISO 2351-2, NF ISO 1173, ISO 2351-2, ISO 1173, DIN ISO 2351-2

EP	L [mm]	Phillips [No]	ΔΔ [g]
EP.0X2	28	PH.00	3
EP.000	28	PH.0	3

■ EP.0 - Screwing bits series 0-drive 4 mm for Pozidriv® screws



NF ISO 2351-2, NF ISO 1173, ISO 2351-2, ISO 1173, DIN ISO 2351-2

EP	L [mm]	Pozidriv [No]	ΔΔ [g]
ED.0X2	28	PZ.00	3
ED.000	28	PZ.0	3
ED.001	28	PZ.1	3

■ EH.0 - Screwing bits series 0-drive 4 mm for hollow hex screws



NF ISO 2351-3, NF ISO 1173, ISO 2351-3, ISO 1173, DIN ISO 2351-3

EH	L [mm]	Hex Size [mm]	ΔΔ [g]
EH.000,9	28	0,9	3
EH.001,3	28	1,3	3
EH.001,5	28	1,5	3
EH.002	28	2,0	3
EH.002,5	28	2,5	3

■ ETS.0 - Screwing bits series 0-drive 4 mm for hollow hex spherical head screws

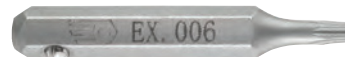


NF ISO 1173, ISO 1173

• The spherical head allows to screw with an angle up to 30°.

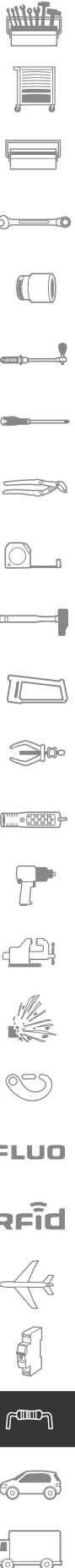
ETS	L [mm]	Hex Size [mm]	ΔΔ [g]
ETS.001,5	28	1,5	3
ETS.002	28	2,0	3
ETS.002,5	28	2,5	3

■ EX.0 - Screwing bits series 0-drive 4 mm for Torx® screws



NF ISO 1173, ISO 1173

EX	L [mm]	Torx [No]	ΔΔ [g]
EX.006	28	T6	2
EX.007	28	T7	2
EX.008	28	T8	2
EX.010	28	T10	2



Socket holder drive



- Bit to use 1/4" "radio" series sockets with the screwdriver series A.300MT and A.340MT.
- Hex drive 4 mm.



	L [mm]	ΔΔ [g]
ECR.0	22	7

Micro-Tech® 12-piece screwdriver set



Contains:

- 5 slotted head screwdrivers: AEF.1x35 - AEF.1.2x35 - AEF.1.5x35 - AEF.2x35 - AEF.2.5x35.
- 2 Phillips® screwdrivers: AEFP.00x35 - AEFP.0x35.
- 3 hex screwdrivers: 84E.0.9x35 - 84E.1.3x35 - 84E.1.5x35.
- 2 Torx® screwdrivers: AEX.6x35 - AEX.7x35.



	L [mm]	ΔΔ [g]
MT.RS2	285	420

Micro-Tech® 5-piece screwdriver set slotted head - Phillips®



Contains:

- 4 slotted head screwdrivers: AEF.1.5x35 - AEF.1.8x35 - AEF.2x35 - AEF.2.5x35.
- 1 Phillips® screwdriver: AEFP.00x35.
- Case dimensions: L.178 x W.91 x H.25.



	l [mm]	L [mm]	ΔΔ [g]
AEF.J1	91	178	170

Micro-Tech® 8-piece screwdriver set slotted head - Phillips®



Contains:

- 5 slotted head screwdrivers: AEF.2x75 - AEF.2.5x75 - AEF.3x75 - AEF.3.5x75 - AEF.4x75.
- 3 Phillips® screwdrivers: AEFP.00x75 - AEFP.0x75 - AEFP.1x75.
- Case dimensions: L.205 x W.130 x H.31 mm.



	l [mm]	L [mm]	ΔΔ [g]
AEF.J3	130	205	384

Micro-Tech® 5-piece screwdriver set slotted head - Pozidriv®

Contains:

- 3 slotted head screwdrivers: AEF.2x75 - AEF.2.5x75 - AEF.3x75.
- 2 Pozidriv® screwdrivers: AEFD.0x75 - AEFD.1x75.
- Case dimensions: L.183 x W.109 x H.32 mm.

Icon	l [mm]	L [mm]	Dimension [mm]	ΔΔ [g]
AEF.J5	109	183	255 x 180 x 30	230



Micro-Tech® 8-piece screwdriver set slotted head - Phillips® - Pozidriv®

Contains:

- 5 slotted head screwdrivers: AEF.2x75 - AEF.2.5x75 - AEF.3x75 - AEF.3.5x75 - AEF.4x75.
- 1 Phillips® screwdriver: AEFP.00x75.
- 2 Pozidriv® screwdrivers: AEFD.0x75 - AEFD.1x75.
- Case dimensions: L.215 x W.130 x H.31 mm.

Icon	l [mm]	L [mm]	ΔΔ [g]
AEF.J6	130	215	385



Micro-Tech® 5-piece screwdriver set Phillips®

Contains:

- 5 Phillips® screwdrivers: AEFP.00x35 - AEFP.00x75 - AEFP.0x35 - AEFP.0x75 - AEFP.1x75.
- Case dimensions: L.183 x W.109 x H.32 mm.

Icon	l [mm]	L [mm]	ΔΔ [g]
AEFP.J1	109	183	267



Micro-Tech® 5-piece screwdriver slotted head

Contains:

- 5 slotted head screwdrivers: AEF2x75 - AEF2.5x75 - AEF3x75 - AEF3.5x75 - AEF4x75.
- Case dimensions: L.183 x W.109 x H.32 mm.

Icon	l [mm]	L [mm]	ΔΔ [g]
AEF.J2	109	183	237



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MICRO-TECH® SCREWDRIVER KITS

Micro-Tech® 8-piece 8 piece replacable blade screwdriver set head - Phillips®



Comprising:

- 6 slotted head screwdrivers: AE.1x35 - AE.1.2x35 - AE.1.5x35 - AE.1.8x35 - AE.2x35 - AE.2.5x35.
- 2 Phillips® screwdrivers: AEP.000x35 - AEP.00x35.
- Case dimensions: L.205x W.130 x H.31 mm.



➤	l [mm]	L [mm]	ΔΔ [g]
AE.J1	130	205	270

Micro-Tech® 5-piece screwdriver set Torx®



Comprising:

- 5 Torx® screwdrivers: AEX.6x35 - AEX.7x35 - AEX.8x75 - AEX.9x75 - AEX.10x75.
- Case dimensions: L.183x W.109 x H.32 mm.



➤	l [mm]	L [mm]	ΔΔ [g]
AEX.J1	109	183	280

Micro-Tech® 8-piece screwdriver set Torx®



Comprising:

- 8 Torx® screwdrivers: AEX.5x35 - AEX.6x35 - AEX.7x35 - AEX.8x75 - AEX.9x75 - AEX.10x75 - AEX.15x75 - AEX.20x75.
- Case dimensions: L.205 x W.130 x H.31 mm.



➤	l [mm]	L [mm]	ΔΔ [g]
AEX.J2	130	205	335

5-piece set of hex screwdrivers



Comprising:

- 5 hex screwdrivers: 84E.0.9x35 - 84E.1.3x35 - 84E.1.5x35 - 84E.2x75 - 84E.2.5x75.
- Case dimensions: L.183 x W.109 x H.32 mm.



➤	l [mm]	L [mm]	ΔΔ [g]
84E.J1	109	183	250

MICRO-TECH® KIT

■ **10-piece Micro-Tech® set of short combination wrenches**

Comprising:

- 10 combination wrenches series 39:
3.2 - 4 - 5 - 5.5 - 6 - 7 - 8 - 9 - 10 - 11 mm.
- Case dimensions: L. 123 x W.95 x H.28 mm.



ED	A [mm]	ΔΔ [g]
39.JE10	3,2 - 4 - 5 - 5,5 - 6 - 7 - 8 - 9 - 10 - 11	266

■ **Micro-Tech® 11-tool set**

Comprising:

- 5 slotted head screwdrivers: AE.1.2 x 35 - AEF.1.5 x 35 - AEF.1.8 x 35 - AEF.2 x 35 - AEF.2.5 x 35.
- 3 Phillips® screwdrivers: AEFP.000 x 35 - AEFP.00 x 35 - AEFP.0 x 35.
- 1 pair of tweezers: 140A.
- 2 pair of pliers: 405.10 MT - 432 LMT.
- Case dimensions: L.285 x W.138 x H.26 mm.



ED	l [mm]	L [mm]	ΔΔ [g]
MT.J3	138	285	726



■ **Micro-Tech® 16-tool set**

Comprising:

- 6 slotted head screwdrivers: AE.1 x 35 - AE.1.2 x 35 - AEF.1.5 x 35 - AEF.1.8 x 35 - AEF.2 x 35 - AEF.2.5 x 35.
- 2 Phillips® screwdrivers: AEP.000 x 35 - AEFP.00 x 35.
- 3 hex screwdrivers: 84E.0,9 x 35 - 84E.1,3 x 35 - 84E.1,5 x 35 .
- 2 pairs of pliers 405.10MT- 432LMT.
- 1 pair of scissors 841.MT.
- 1 cutter 845.1.
- 1 pair of tweezers 140AA.
- Case dimensions: L.366 x W.180 x H.66 mm.



ED	l [mm]	L [mm]	ΔΔ [kg]
MT.J1	180	366	1,1



■ **Micro-Tech® 16-tool set - screwdriver + bits**

Comprising:

- 1 bit holder screwdriver AEM.M.
- 5 bits series 0 for slotted head screws: ES.002 - ES.002.5 - ES.003 - ES.004 - ES.004.5.
- 2 bits series 0 for Phillips®: EP.0x2 - EP.000.
- 2 bits series 0 for Pozidriv®: ED.0x2 - ED.000.
- 3 bits series 0 hex: EH.001.5 - EH.002 - EH.002.5.
- 3 bits series 0 hex spherical head: ETS.001.5 - EH.002 - EH.002.5.
- Case dimensions: 183 x 109 x 32 mm.



ED	l [mm]	L [mm]	ΔΔ [g]
AEM.J1	109	183	237



Micro-Tech® 26-tool set - socket holder + bits + sockets



Comprising:

- 1 bit holder screwdriver AEM.M.
- 5 bits series 0 for slotted head screw: ES.002 - ES.002.5 - ES.003 - ES.004 - ES.004.5.
- 2 bits series 0 for Phillips®: EP.0x2 - EP.000.
- 2 bits series 0 for Pozidriv®: ED.0x2 - ED.000.
- 3 bits series 0 hex: EH.001.5 - EH.002 - EH.002.5.
- 3 bits series 0 hex spherical head: ETS.001.5 - EH.002 - EH.002.5.
- 4 bits series 0 for Torx: EX.006 - EX.007 - EX.008 - EX.010.
- 1 socket holder ECR.0.
- 5 1/4" sockets: R.3.2 - 4 - 5 - 5.5 - 7 mm.
- Case dimensions: 205 x 130 x 31 mm.



	l [mm]	L [mm]	ΔΔ [g]
AEM.J2	130	205	340

WATCHMAKER SCREWDRIVER SETS

5-piece watchmaker screwdriver set for slotted head screws



Comprising:

- 5 screwdrivers for slotted head screws: 0.8 x 13 - 1 x 16 - 1.2 x 17 - 1.6 x 19 - 2.5 x 21 mm.
- Presentation: chromed, hardened blade.
- In plastic case.



	ΔΔ [g]
HB.1B	130

6-piece watchmaker screwdriver set for Phillips® - hex screw



Comprising:

- 3 hex screwdrivers: 1.5 - 2 - 2.5 mm.
- 3 Phillips® screwdrivers: PH N°00 - 0 - 1.
- Presentation: chromed, hardened blade.
- In plastic case.



	ΔΔ [g]
HB.2B	200

9-piece watchmaker screwdriver set for slotted head screws



Comprising:

- 9 slotted head screwdrivers: 0.6x11 - 0.8x11 - 1x12 - 1.2x12 - 1.4x12 - 1.6x15 - 2x15 - 2.5 x 15.5 - 3x15.5 mm.
- Replaceable blades.
- Supplied on carousel with blade reserve.



	ΔΔ [g]
HB.4	340

STANDARD SERIES

140 - Tweezers anti-magnetic or anti-reflection straight models



- Smooth pointed nose.
- 140.AA: satin polished presentation. Anti-magnetic stainless steel material.
- 140.AAW13: anti-reflection black presentation. Carbon steel material.

Icon	L [mm]	Finish	ΔΔ [g]
140.AA	125	Satin polished	17
140.AAW13	130	Anti-reflection black	16

Tweezers straight model - narrow nose



- Smooth narrow and pointed nose.
- Stainless steel.
- Presentation: fine polished.

Icon	L [mm]	ΔΔ [g]
148	130	15

Tweezers straight model - fine grooved nose



- Long, thin, groove tip nose with guide.
- Stainless steel.
- Presentation: fine polished.

Icon	L [mm]	ΔΔ [g]
149	155	18

Tweezers straight model - strong grooved nose



- Long, strong, groove tip nose with guide.
- Stainless steel.
- Presentation: fine polished.

Icon	L [mm]	ΔΔ [g]
150	165	22

Tweezers model angled at 40°



- Long, strong, groove tip nose with guide.
- Stainless steel.
- Presentation: fine polished.

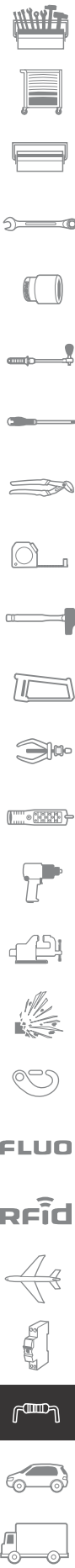
Icon	L [mm]	ΔΔ [g]
151	155	22

Tweezers model angled at 45°



- Thin, grooved nose with guide.
- Stainless steel.
- Presentation: fine polished.

Icon	L [mm]	ΔΔ [g]
152	150	19



■ Tweezers straight model - cross nose



- Grooved, crossed, self-locking nose.
- Stainless steel.
- Presentation: fine polished.

Icon	L [mm]	ΔΔ [g]
153	150	23

■ Tweezers straight model - power nose



- Power, rigid, grooved nose for wiring.
- Stainless steel.
- Presentation: fine polished.

Icon	L [mm]	ΔΔ [g]
154	155	30

PVC SHEATH SERIES

■ PVC sheath tweezers straight model



Icon	L [mm]	ΔΔ [g]
149.Y	155	25

■ PVC sheath tweezers model angled at 45°



Icon	L [mm]	ΔΔ [g]
152.Y	150	25

■ PVC sheath tweezers model for picking components - straight shank



- Diameter 2.5 to 4 mm, in the axis of the tweezers.

Icon	L [mm]	ΔΔ [g]
146.1Y	140	25

■ PVC sheath tweezers model for picking components - perpendicular shank



- Diameter 2.5 to 4 mm, perpendicular to the tweezers axis.

Icon	L [mm]	ΔΔ [g]
146.2Y	140	25

HIGH PRECISION SERIES

■ Tweezers "high precision" straight very pointy model



• Extra-flexible, smooth very pointed nose.

Icon	L [mm]	ΔΔ [g]
141.11	110	13

■ "High precision" tweezers straight model



• Extra-flexible, smooth very pointed nose.

Icon	L [mm]	ΔΔ [g]
141.12	130	14

■ "High precision" tweezers straight model - cleared nose



• Extra-flexible, smooth very pointed nose.

Icon	L [mm]	ΔΔ [g]
142.1	112	13

■ "High precision" tweezers 15° angled model - cleared nose



• Extra-flexible, smooth very pointed nose.

Icon	L [mm]	ΔΔ [g]
142.2	117	15

■ "High precision" tweezers curved straight model



• Extra-flexible, smooth very pointed nose.

Icon	L [mm]	ΔΔ [g]
143	114	14

■ Tweezers "high precision" straight model - very slim nose



• Fine rounded, smooth nose.

Icon	L [mm]	ΔΔ [g]
144	120	17



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■ Tweezers "high precision" straight model - wide flat nose



- Smooth nose.
- Nose width: 7 mm.

Icon	L [mm]	ΔΔ [g]
145	123	14

■ "High precision" tweezers straight power model



- Thin grooved nose.

Icon	L [mm]	ΔΔ [g]
156	110	15

SPECIAL TWEEZERS

■ Plastic tweezers straight model - sterilizable



- Material: polypropylene, sterilizable 180 °C max.

Icon	L [mm]	ΔΔ [g]
150.P1	125	6

■ 150.P - Plastic tweezers straight models - anti-static



- Material: glass fiber reinforced (20%) anti-static polyamide.
- Anti-magnetic.
- Resistant to acid.
- Resistant to temperatures up to 200 °C.
- Precision, smooth nose.
 - 150.P10: wide straight nose.
 - 150.P11: thin angled nose.

Icon	L [mm]	ΔΔ [g]
150.P10	120	5
150.P11	120	5

■ Tweezers cutting model for extra-thin wires



- Carbon alloy steel for perfect cutting edges.
- Very high precision cut.
- Presentation: fine polished.
- Nose tip width: 10 mm.



Icon	L [mm]	ΔΔ [g]
139	110	27

SETS OF TWEEZERS

Set of 7 tweezers

- The set is presented in plastic case.



Code	L [mm]	Set contents	Dimension [mm]	ΔΔ [g]
147.J7	205	140.AA - 141.14 - 142.1 - 142.2 - 143 - 144 - 145	205 x 130 x 31	335

SPECIAL MICRO-TECH® PLIERS

CIRCLIP® PLIERS

Set for inside and outside circlips®

Contains:

- 1 outside circlips plier 467.PMT.
 - 1 inside circlips plier 469.PMT.
- These pliers include a spring-assisted opening and a screw-stop adjustment to avoid deforming the circlips and ensure precise fitting or removal.
- 6 sets of straight and angled tips.
 - 1 key.
 - Chrome polished. PVC sheathed branches.
 - Supplied in plastic case: 285 x 142 x 46 mm.

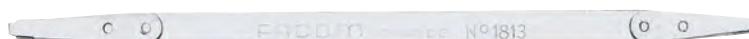


Code	l [mm]	L [mm]	ΔΔ [g]
470.MT	142	285	600

TRUARC® PLIERS

Tool for Truarc® rings

- For fitting and removing Truarc rings, maximum diameter 6 mm, in difficult access locations.



Code	L [mm]	ΔΔ [g]
1813	170	19



VARIOUS TOOLS

SCISSORS

"Stubby" scissors

- For high precision cutting.
- Left/right hand model.
- Chrome polish, PVC sheathed branches.



Code	L [mm]	ΔΔ [g]
841.MT	155	10



CUTTER

■ Interchangeable-blade safety knife



- For precise and neat cutting.
- Blades perfectly held.
- 2 types of blades.
- Length: 150 mm.
- Knife supplied with 10 L1-type blades.
- Spare blades:
 - 845.L1: Set of 10 straight thin blades.
 - 845.L2: Set of 10 offset blades.



	L [mm]	ΔΔ [g]
845.1	150	15

HACKSAW FRAME

■ Micro-Tech® hacksaw frame



- Ideal for light duty work on plastic, wood or metal.
- Ergonomic grip handle for comfort.
- Light weight for intensive use.
- Zamak lacquered for longer life.
- Supplied with a 150 mm blade.



	L [mm]	ΔΔ [g]
607.MT	262	140

■ Saw blades



- Set of 5 blades 12 teeth/cm



	ΔΔ [g]
608.L12	14

VARIOUS TOOLS

■ Clamp tool-holder



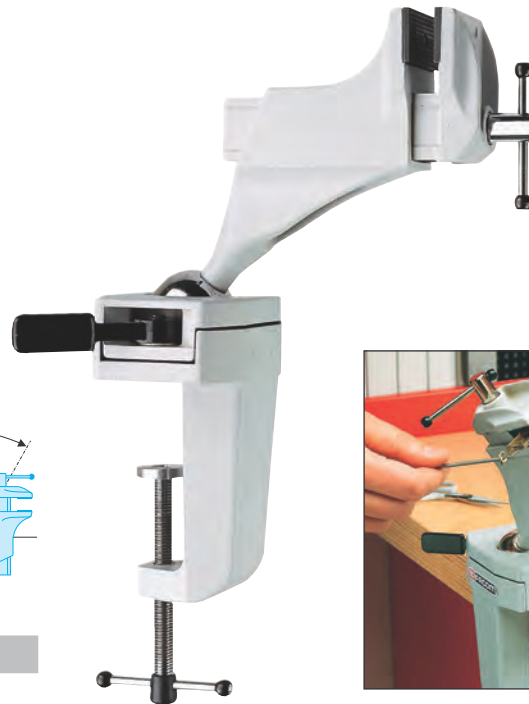
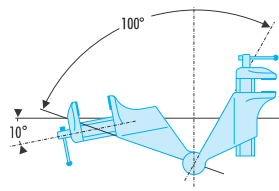
- Each end has a double clamp and a chuck.
- Can be fitted with any cylindrical tool diameter 0.5 to 3.5 mm.



	L [mm]	ΔΔ [g]
1817	110	35

Micro-Tech® swivel-base vice

- Designed for a comfortable work position ensuring high precision.
- Instant locking lever on swivel base.
- Fastener for firm fastening on a support of 80 mm thick max.
- Jaws in glued plastic, width: 50 mm.
- Max opening: 70 mm.
- Max depth: 38 mm.



	$\Delta\Delta$ [kg]
1150.MT	1.4

Pen oil can

- For precise greasing, drop by drop, by pressing the button.
- Level visible.
- Protection cap.
- Metal fastener for clipping in the pocket.
- Spread: 5 cm³.



	$\Delta\Delta$ [g]
372	20

Spring hook

- With pusher hook and traction hook.
- Presentation: chromed, sheathed.



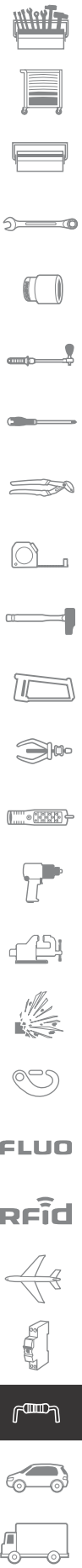
	L [mm]	$\Delta\Delta$ [g]
835A	200	13

Separator

- With a fork and tip diameter 0.5 mm.
- Presentation: chromed, sheathed.



	L [mm]	$\Delta\Delta$ [g]
835.1	210	15



Pen light



- 1 3W LED.
- 110 lumens.
- 2 304 lux at 0,5 m.
- Running time 3,5 hours.
- Protection rating: IP65.
- Supplied with: 2 AAA batteries, shop and protection pouch.



Part No.	Weight [g]
779.PBT	58

1830 - Brushes



1830.1



1830.3



1830.4

- For cleaning, removing dust.
- 1830.1: Extra-soft silk brush.
- 1830.3: Etching brush: nylon outside, metallic wires at the centre.
- 1830.4: Soft nylon brush.



Part No.	L [mm]	L1 [mm]	Weight [g]
1830.1	190	-	17
1830.3	190	50	35
1830.4	230	100	30

Set of 2 tuning screwdrivers for slotted head screws



- Screwdriver dimensions:
 - HT.2x2.4: 2 and 2.4 mm.
 - HT.3x4: 3 and 4 mm.
- Screwdrivers available per unit.
- Supplied in roll.



Part No.	Weight [g]
HT.3	26

Mechanical retriever with 4 claws



- To recover small flat parts with max diameter 30 mm.
- Presentation: nickel-plated.



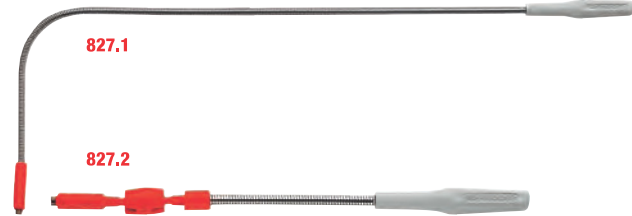
Part No.	Weight [g]
826.0	20

827 - Extra-thin flexible magnetic retrievers

- 827.1: flexible and long model head diameter 7 mm.
- 827.2: ball joint model head diameter 8 mm.
- Max lifted weight: 120 g.



827	L [mm]	ΔΔ [g]
827.1	530	80
827.2	210	26



Flexible magnetic retriever

- Magnet diameter: 12 mm.
- Max lifted weight: 850 g.



827.M	L [mm]	ΔΔ [g]
827.M	570	220



Flexible magnetic retriever - high power

- Powerful magnet (3 kg).
- Magnetic flux conductor prevents sticking to sides.
- Length 560 mm, adjustable stiffness.
- Magnet diameter: 12 mm.



827B	L [mm]	ΔΔ [g]
827B	560	130



"Luminous" flexible magnetic retriever

- Magnet diameter: 15 mm.
- Max lifted weight: 1.2 kg.
- LR1 battery.



828	L [mm]	ΔΔ [g]
828	590	220

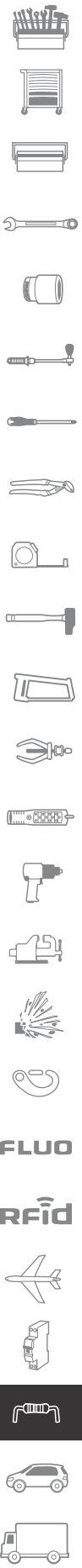


Flexible mechanical retriever 460 mm

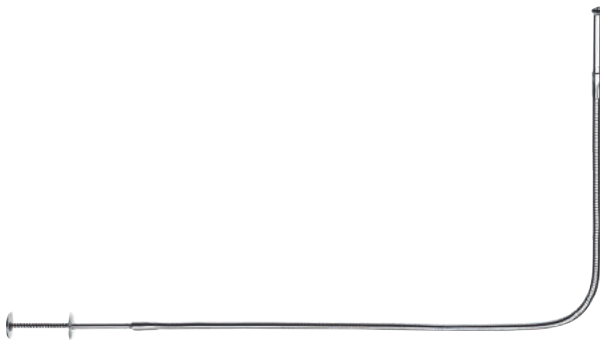
- Max nose opening diameter: 29 mm.



825.1	L [mm]	ΔΔ [g]
825.1	460	200



Flexible mechanical retriever 1000 mm

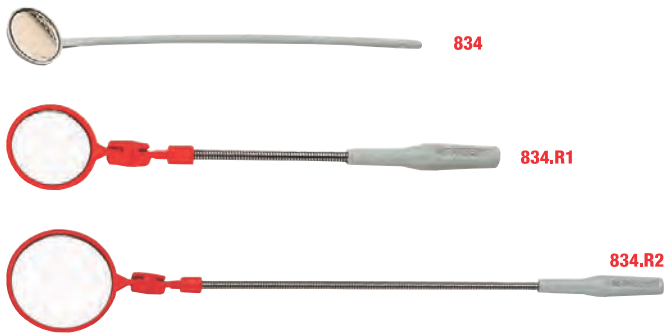


- Max nose opening diameter: 29 mm.



🔧	L [mm]	ΔΔ [g]
826.2	1000	400

834 - Inspection mirrors



- Mirror crimped on plastic.
- 834: one-piece rigid.
- 834.R1: jointed and flexible.
- 834.R2: jointed and flexible.



🔧	d [mm]	L [mm]	ΔΔ [g]
834	24	175	4
834.R1	36	210	13
834.R2	55	360	40

Inspection mirror

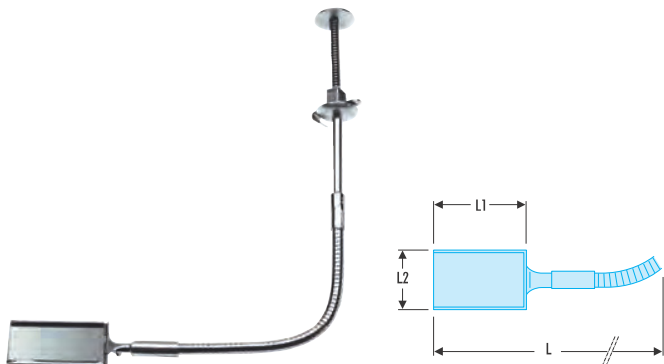


- Mirror in scratch resistant glass, available as spare parts.
- Metallic strapping around the glass for better protection.
- Join easily adjustable, or even locked, by screw.
- Solvent resistant plastic handle: Skydroll, gasoil...
- Max length 850 mm.
- Mirror diameter 55 mm.
- 834B.RT01: Spare mirror.



🔧	ΔΔ [g]
834B.RT	80

Flexible orientable mirror



- The mirror is turned by pressing the button on the handle.



🔧	L [mm]	L1 [mm]	L2 [mm]	[g]
829	495	70	45	225

834A.R - Flexible mirrors

- Flexible mirror adapting to all types of parts.
- Hinged head for enhanced visibility in cluttered locations.



834A.R	d [mm]	L [mm]	ΔΔ [g]
834A.R	70x45	308	44

834B.RTI - Telescopic mirrors

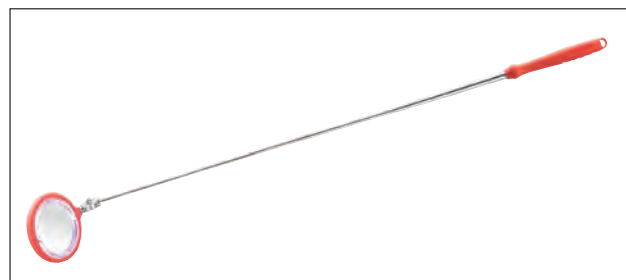
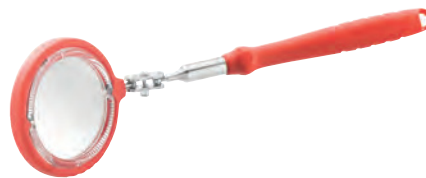
- Mirror with LED back lighting for better visibility in dark areas.
- Scratch resistant glass.
- Molded plastic rim around the glass to protect parts and ensure mirror durability.
- Joint easily adjustable, and lockable by screw.
- Ergonomic plastic handle resistant to solvents: Skydroll, diesel fuel, etc.
- Max length 850 mm.



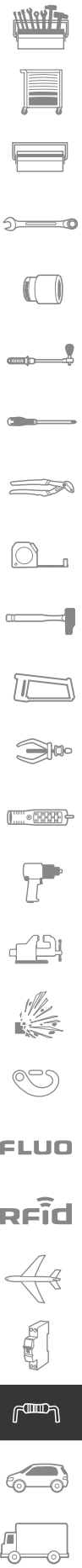
	d [mm]	L [mm]	ΔΔ [g]
834B.RTI	55	955	78
834B.RTIS	33	935	68
834B.RTIR	70x54	970	88

Telescopic mirror with magnifying effect

- Mirror with magnifying effect.
- Scratch resistant glass.
- Molded plastic rim around the glass to protect parts worked on and ensure mirror durability.
- Joint easily adjustable, and lockable by screw.
- Ergonomic plastic handle resistant to solvents: Skydroll, diesel fuel, etc.
- Max length 850 mm.



834B.RTIM	ΔΔ [g]
834B.RTIM	78



VARIOUS TOOLS

■ Black mini wire-holder



- Insulated model with 2 claws, flexible tube diameter 3 mm.



	L [mm]	ΔΔ [g]
1802A.N	130	10

■ Red mini wire-holder



- Insulated model with 2 claws, flexible tube diameter 3 mm.



	L [mm]	ΔΔ [g]
1802A.R	130	10

■ Black contact tip



- Insulated model, brass tip and socket diameter 4 mm for 1804B chord.
- Supplied with protection cap.



	ΔΔ [g]
1803A.N	15

■ Red contact tip



- Insulated model, brass tip and socket diameter 4 mm for 1804B chord.
- Supplied with protection cap.



	ΔΔ [g]
1803A.R	15

■ Black connection cable



- Very flexible insulated model with retractable protection.
- 2 connectors diameter 4 mm for contact tip and mini-wire-holder.
- Length: 2.1 m.



	L [m]	ΔΔ [g]
1804B.N	2.1	50

■ Red connection cable



- Very flexible insulated model with retractable protection.
- 2 connectors diameter 4 mm for contact tip and mini-wire-holder.



	L [m]	ΔΔ [g]
1804B.R	2.1	50

THERMOREGULATED SOLDERING UNITS

■ Anti-static digital welder 68 watts

- Ultra fast heating time: 9 s.
- Automatic standby mode for less power consumption and automatic power off.
- Super compact station.
- Temperature calibration possible for higher accuracy. Reduction of temperature of the display and that of the soldering iron tip.
- Setpoint temperature: 360 °C / 680 °F.
- Temperature range: 150 to 450 °C, 300 to 842 °F.
- Stability: + or - 2°C.
- Power: 68 W.
- Supply voltage: 220 - 240 V ~ 50/60 Hz 110 - 120 V ~ 50/60 Hz.
- Dimensions (L x H x D): 145 mm x 80 mm x 103 mm.
- Soldering iron 1003B.68E:
 - Dimensions: L x handle Ø / 175 mm x 12 mm.
 - Cable length: 950mm.
 - Weight: 30 g (without cable).
- Holder:
 - Dimensions (L x H x D): 140 mm x 80 mm x 80 mm.
 - Weight: 200 g.
- Spare iron tips 1003B.68E:
 - 1003B.P1: thin pen tip (0.4mm).
 - 1003B.P2: large pen tip (1.0mm).
 - 1003B.P3: screwdriver tip (1.6mm).



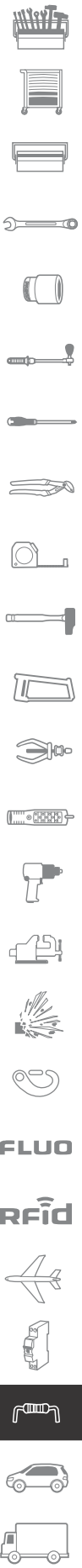
	L [mm]	ΔΔ [kg]
1003B.E	145	1.0

■ Soldering iron stand

- Stores a soldering iron type Facom 1230 or equivalent immediately after welding work. It can be transported safely in a maintenance case. The insulating part does not contain any asbestos.
- 180 x diameter 35 mm.



	ΔΔ [g]
BV.21-10	210



Electronic soldering iron

- Power: 68 W.
- Supply voltage: 220 - 240 V ~ 50/60 Hz 110 - 120 V ~ 50/60 Hz.
- Dimensions: L x handle \varnothing / 175 mm x 12 mm.
- Cable length: 950mm.



	$\Delta\Delta$ [g]
1003B.68E	136

ELECTRONIC IRONS

Electronic soldering



- More ergonomic grip
 - Uses less power / more energy efficient
 - Faster heating time / consistent temperature and recovers quickly between usages
 - More suited for electronic applications
 - No change to quality, durability and better temperature results expected by the professional user
 - Power supply 230V
 - Range from 15W to 40W.
 - 1,5M cable length. PVC 2 conductor cable (2x 0.75)
 - Supplied with iron stand.
- Spare tips:
- Pointy tip 1230.15-35P2
- Supply with standard tip & black stand.

	Range [W]	$\Delta\Delta$ [g]
1230B.15	15	219
1230B.20	20	219
1230B.25	25	219

Bi-watt 20-40 electronic soldering



- More ergonomic grip
- Uses less power / more energy efficient
- Faster heating time / consistent temperature and recovers quickly between usages
- More suited for electronic applications
- New higher max temperature at 440
- No change to quality, durability and better temperature results expected by the professional user
- Power supply 230V
- 1.5M cable length. PVC 2 conductor cable (2x 0.75)
- Supplied with iron stand.

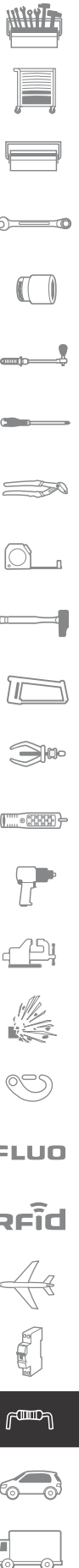
Model	Weight [g]
1116C.BW	219

Instant-heat 100 W - 230 V soldering iron

- Double insulation.
- Ready to run (5 s) once the trigger pressed.
- When the trigger is released, the tip cools down instantly.
- Useful for punctual and intermittent work, handy in maintenance case.
- Lighting device effective and well protected.
- Supplied with 3 stainless steel tips for power 40, 70 and 100 W, a tightening key, a coil of tin and a 1 pot of etching paste in a polystyrene case.
- PVC 2-conductor cable (2 x 0.75 mm²). Length: 1.25 m.
- Connector with 2 poles.
- Spare tip: 848.100P2



Model	Length L [mm]	Weight ΔΔ [g]
848B.100	270	1000



HIGH POWER SOLDERING IRONS

947A - High power irons - 230 V



- Power range from 50 to 400 W.
- Supplied with an angled tip.
- Very high yield with excellent robustness.
- Shape designed for difficult access.
- Shiny copper tips.
- Stainless steel heating body tube.
- These irons meet the requirements of the EN 60335 - 2 - 45 standard.



➤	Ø Peak [mm]	L [mm]	Peak	Rating [W]	Peak temp ± 10% [°]	ΔΔ [g]
947.50	6	266	947.50P1	50	390	290
947.80	8	295	947.80P1	80	400	330
947A.100	10	300	947.100P1	100	420	440
947A.200	15	315	947.200P1	200	450	675
947A.300	20	320	947.300P1	300	470	960
947A.400	20	320	947.300P1	400	500	960

SOLDERING ACCESSORIES

839 - Desoldering pumps

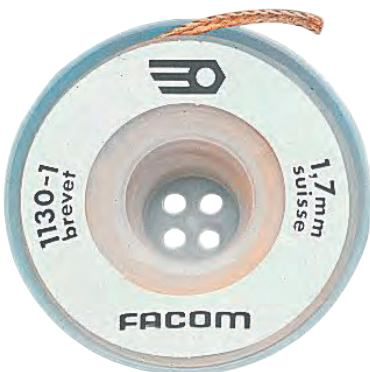


- Double gasket: one provides cleaning, allowing the other to guarantee perfect sealing.
- Sets of 5 spare tips:
 - 839.E1J5: standard, white.
 - 839.EJ5: thin, black, antistatic.



➤	L [mm]	Contents	ΔΔ [g]
839A	190	Plastic wallet	75
839A.0	165	Plastic wallet	36
839A.1	200	Plastic wallet	78
839A.7	195	Plastic wallet	78

Desoldering braid



- This braid provides remarkable absorbing qualities. It avoids thermal shock for delicate components.
- Width: 1.6 mm.
- Length: 1.6 m.

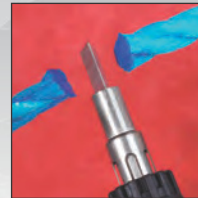
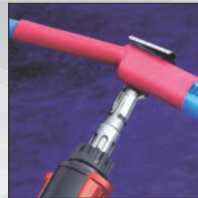


➤	Width l [mm]	L [mm]	ΔΔ [g]
1130.1	1.6	1600	15

GAS SOLDERING IRON

GAS SOLDERING IRON

One tool - four functions



- 1 Soldering (Electronics, etc.).
- 2 Hot fitting (Heat-shrinkable tubing, etc.).
- 3 Blowtorch
- 4 Hot-cutting (Plastic, rubber, etc.).

- Rechargeable butane gas burner.
- Integral ignition system (Piezo-electric system).
- Adjustable power setting.
- Safe: The cap on the end of the nozzle keeps the gas control valve closed.

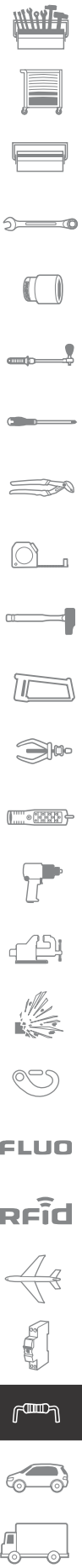


Gas soldering iron

- Tip temperature: 250°C ~ 550°.
- Blow torch: 1100°C.
- Max temperature: 1300°C.
- Piezo-electric ignition.
- Fuel content 10 ml.
- Operating time (per recharge) 55 min. For half-filling.
- Heating time 40 sec.
- Power: 24 Watts.
- Dimensions:
 - Cap included: 198 mm.
 - Length: With tip: 189 mm.
 - With heat blower: 181 mm.
- Rechargeable with butane gas (iron supplied empty).
- 4 soldering tips: 1075.HS.
- 1 solder wire reel: 1075.HD.



1075.H ⚠ [g] 278



FLUO

Rfid



AUTOMOTIVE

**MOBILE LIFTING EQUIPMENT****1020**

Heavy-duty trolley jacks	1020
Hydraulic presses	1030
Inspection creepers - Pry bars	1033

**ELECTRIC AND HYBRID VEHICLES****1038**

Consigning kits - Safe	1038
Sign posts and chains	1040

**LUBRICATION - FILTRATION****1042**

Drain plug wrenches	1042
Oil-Filter wrenches	1048
Cap wrenches and sockets	1053

**SPARK PLUGS****1056**

3/8" Square drive sockets	1057
Round tip metric thickness gauges	1059
Glow plug tester	1062

**AUTO ELECTRICS****1062**

Testers and multimeters	1062
Battery chargers	1065
Booster	1067
Battery tools	1071
Fuses and connectors - Car radio	1073

**ENGINE****1075**

Engine support	1075
Pressure control	1078
Common Rail Injector tools	1081
Fuel injection	1084
Cooling system tester	1087
Cylinder head - Valves	1088
Digital control tools	1093
Pistons - Piston rings	1095
Maintenance	1096
Other	1096

**DIESEL ENGINE TIMING KIT****1099**

Timing kits	1101
Timing pulley and belt fitting and removal	1109

**TRANSMISSION****1111**

Gearbox and clutch	1111
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**BRAKES - HG****1111**

Inspection	1111
Diagnostics and bleeding	1113
Disc brakes	1114
Drum brakes	1116
Brake lines	1117

**SUSPENSION****1118**

Spring compressors	1119
Workstation	1123
Strut removal	1124
Tools for shock absorbers	1124

**WHEEL - HUB - TRANSMISSION****1125**

Wheel removal and inspection	1125
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**BODYWORK****1132**

Inspection lamp - Bodywork	1133
Supports	1134
Stripping tools	1135
Air hammer	1142
Panel beating hammers	1147
Air tools - paint preparation	1156
Windshield tools	1159
Hydraulic equipment	1162

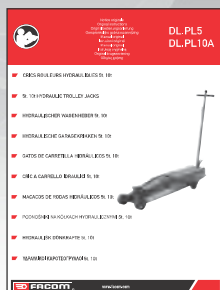


LIFTING EQUIPMENT RANGE

For FACOM, your safety is paramount



- Conformity with the European directive on machinery and standards checked by an independent laboratory.



- Detailed manual.
- Exploded views.
- Spare parts list.
- Maintenance log.



- Permanent identification markings.



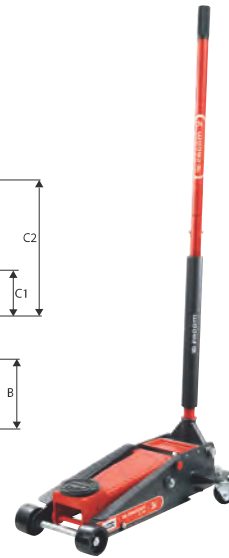
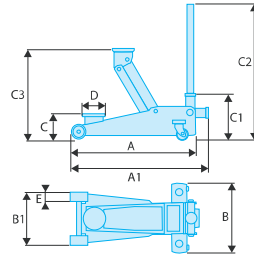
- Comprehensive safety instructions.



HEAVY-DUTY TROLLEY JACKS

3T mutil purpose car and LCV floor jack

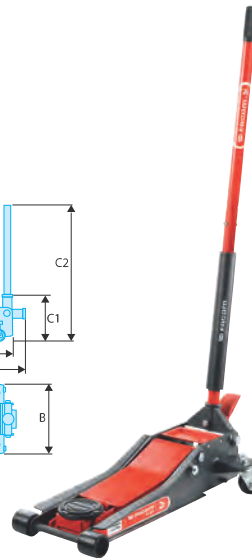
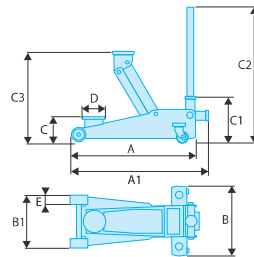
- Force: 3 t.
- Maximum lift: 465 mm
- Minimum under-body clearance: 133 mm.
- Quick-lift device brings jack into contact in a single movement.
- Under-body rubber plate.
- Tube fitted with protection foam.
- Silent-running polyurethane-tired wheels.
- Overload valve.
- Dimensions (L x W x H.): 690 x 337 x 163 mm.
- EC standard EN1494-ASME-PASE.



	A	A1	B	B1	C	C1	C2	C3	D	E	H	Width I	L	Tonnes	ΔΔ
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[t]	[kg]
DL.32A	615	680	344	255	133	220	1305	465	108	48	163	337	690	2	30.5

2T gearbox & engine support trolley jack

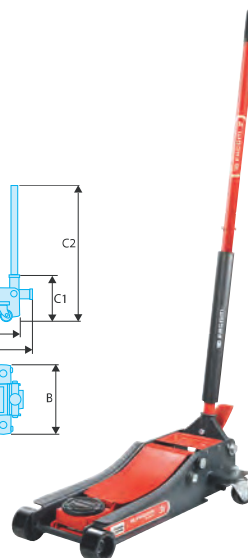
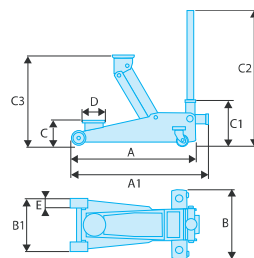
- Ideal for distributions and for low ground clearance vehicles, or fitted with rocker panel protections.
- Lifting capacity: 2 t.
- Maximum lift: 505 mm
- Minimum under-body height: 75 mm.
- Quick lift double piston mechanism.
- Load descent rate regulation.
- Supplied with steel / rubber under-body bearing plate.
- Silent-running polyurethane-tired wheels.
- EC standard EN1494-ASME-PASE.



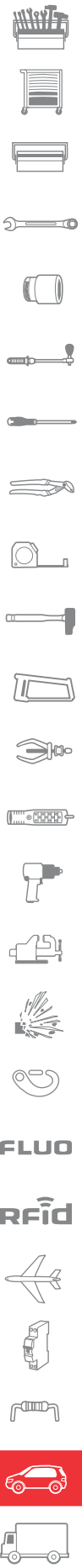
	A	A1	B	B1	C	C1	C2	C3	D	E	H	Width I	L	Tonnes	ΔΔ
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[t]	[kg]
DL.2LP	675	762	350	262	75	215	1305	505	108	53	350	675	675	2	32.5

3T extra-flat compact trolley jack

- Ideal for low ground clearance vehicles, or fitted with rocker panel protections.
- Load capacity: 3 t.
- Maximum lifting height: 533 mm
- Minimum height under body: 100 mm.
- Quick lift double piston mechanism.
- Load descent rate regulation.
- Supplied with steel / rubber under-body bearing plate.
- Silent-running polyurethane-tired wheels.
- EC standard EN1494-ASME-PASE.



	A	A1	B	B1	C	C1	C3	D	E	Width I	L	Tonnes	ΔΔ
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[t]	[kg]
DL.3CLP	688	778	375	285	100	230	533	108	52	375	688	3	42.0



HEAVY-DUTY TROLLEY JACKS

■ Foam jack holder

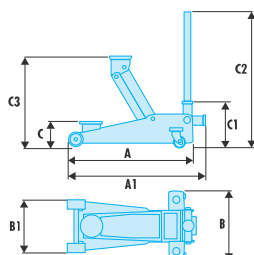
- This plate supports a block of high density foam that spreads the load over a large surface area and avoids damage to aluminium crankcases and under-bodies.
- Can be used on product Ref DL.32A - DL.2LP - DL.3CLP.
- Dimensions with foam block (L x W x H.): 305 x 155 x 40 mm.
- Reference of the foam alone DL.20-02M



	$\Delta\Delta$ [kg]
DL.32A-SUP	4

FLOOR JACKS "MAINTENANCE" RANGE

■ 1.5 t aluminium rolling jack

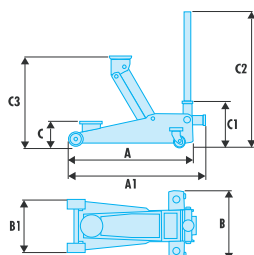


- Load capacity: 1.5 t.
- Maximum lifting height: 360 mm
- Minimum height under body: 90 mm.
- Double piston for fast lifting.
- Side handle for easier carrying and installation.
- Tube fitted with protection foam.
- Supplied with steel / rubber under-body bearing plate.
- Overload valve.
- Dimensions (L x W x H.): 487 x 246 x 132 mm.
- EC standard EN1494+A1.



	A [mm]	A1 [mm]	B [mm]	B1 [mm]	C [mm]	C1 [mm]	C2 [mm]	C3 [mm]	Oil Capacity [cm ³]	Tonnes [t]	$\Delta\Delta$ [kg]
DL.15AL	487	553	248	115	90	132	1082	360	80	1.5	30

■ 2.5 t aluminium rolling jack



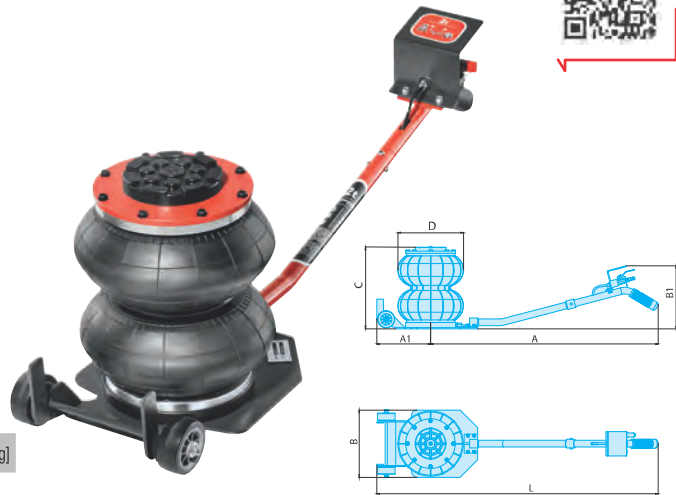
- Load capacity: 2.5 t.
- Maximum lifting height: 450 mm
- Minimum height under body: 100 mm.
- Double piston for fast lifting.
- Side handle for easier carrying and installation.
- Tube fitted with protection foam.
- Supplied with steel / rubber under-body bearing plate.
- Overload valve.
- Dimensions (L x W x H.): 591 x 308 x 173 mm.
- CE compliance Standard EN1494+A1.



	A [mm]	A1 [mm]	B [mm]	B1 [mm]	C [mm]	C1 [mm]	C2 [mm]	C3 [mm]	Oil Capacity [cm ³]	Tonnes [t]	$\Delta\Delta$ [kg]
DL.25AL	591.5	665	308	148	100	173	1370	450	220	2.5	32

2 t pneumatic jack

- Load capacity: 2 t.
- Maximum lifting height: 300 mm
- Minimum height under body: 120 mm.
- Descent speed regulation with the control valve.
- Dimensions (L. x W.): 250 x 1055 mm.
- CE compliance Standard EN1494+A1.
- Fitted with a discharge valve in case of air overpressure.
- Minimum operating pressure: 6 bar.



	A [mm]	A1 [mm]	B [mm]	B1 [mm]	C [mm]	D [mm]	Tonnes [t]	ΔΔ [kg]
DL.2A2L	870	200	250	240	300	250	2	16

2 t safety trolley jack

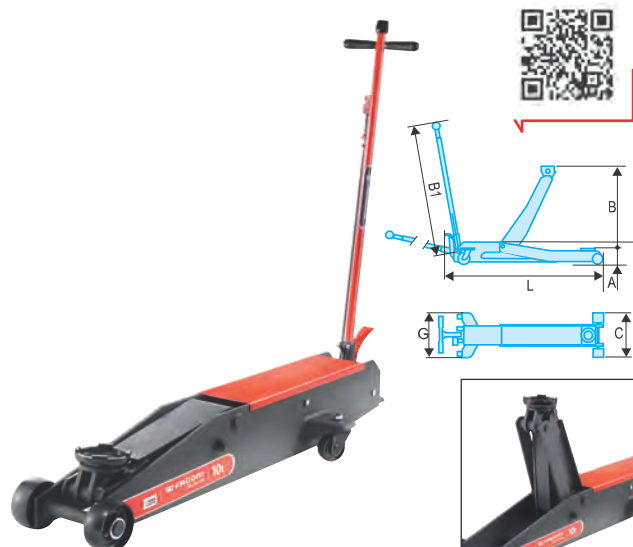
- Load capacity: 2 t.
- Maximum lifting height: 500 mm
- Minimum height under body: 75 mm.
- Fast approach pedal.
- "Dead man" device.
- Load descent rate regulation.
- Additional safety device: mechanical locking at 290 mm (with a 2nd release pedal), the jack cannot drop accidentally.
- Supplied with rubber plate protection.
- Dimensions (L. x W.): 705 x 350 mm.
- Compliant with the machine directive 2006/42/CE - Standard EN1494+A1.



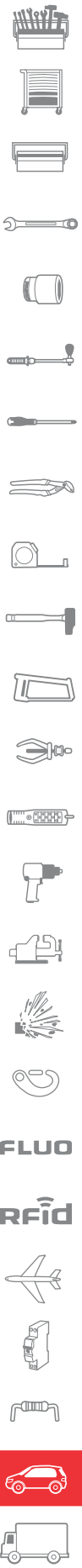
	A [mm]	B [mm]	B1 [mm]	C [mm]	C2 [mm]	C3 [mm]	Tonnes [t]	ΔΔ [kg]
DL.200SECUA	705	350	300	75	1110	500	2	30

5 t "LCV" rolling jack

- Load capacity: 5 t.
- Maximum lifting height: 685 mm
- Minimum height under body: 150 mm.
- Fast foot lifting.
- Handle adjustable in 3 positions 90, 135, 180 degrees.
- Overload valve.
- Dimensions (L. x W x H.): 1506 x 366 x 200 mm.
- EC standard EN1494+A1.



	A [mm]	B [mm]	B1 [mm]	C [mm]	d [mm]	L [mm]	Oil Capacity [cm³]	Tonnes [t]	ΔΔ [kg]
DL.PL5	150	685	1153	150	685	1506	540	5	89



FLOOR JACKS "MAINTENANCE" RANGE

10 t "LUV" rolling jack

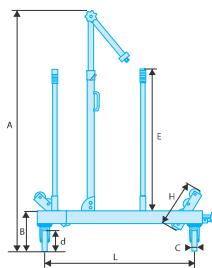


- Load capacity: 10 t.
- Maximum lifting height: 525 mm
- Minimum height under body: 160 mm.
- Fast foot lifting.
- Handle adjustable in 3 positions 90, 135, 180 degrees.
- Overload valve.
- Dimensions (L x W x H.): 1637 x 494 x 249 mm.
- EC standard EN1494+A1.



	A [mm]	B [mm]	B1 [mm]	C [mm]	L [mm]	Oil Capacity [cm ³]	Tonnes [t]	ΔΔ [kg]
DL.PL10A	160	525	1153	333	1637	1050	10	129

Hydraulic tractor wheel lift

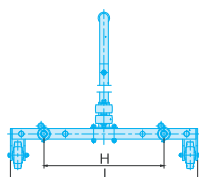
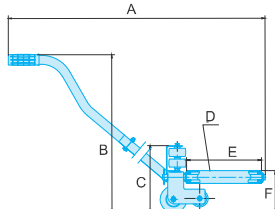


- Load capacity: 1.5 t.
- For easy and secured removal - refitting of wheels on tractors.
- 6 swivel rollers for easy wheel positioning upon refitting.
- Wheel diameter: 1350 to 2150 mm.
- Max width wheels: 800 mm.
- Adjustable width: 1200-1970 mm.
- Floor dimensions: 1310 x 1020 mm.
- 2 wheels with brakes.
- CE Compliance Standard EN1494+A1.



	A [mm]	B [mm]	C [mm]	d [mm]	E [mm]	H [mm]	L [mm]	Tonnes [t]	ΔΔ [kg]
DL.1500	1350-2150	280	50	150	1000	76	210-845	1,5	125

HGV, bus" wheel lift



- Load capacity: 250 Kg.
- Allows easy and secured removal - fitting of wheels on buses, HGVs, forklift trucks
- 2 adjustable rollers for a capacity from 6.5" to 22.5"
- 2 rollers length: 280 mm

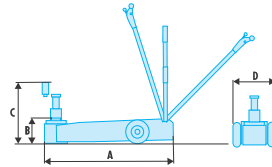


	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	H [mm]	L [mm]	Tonnes [t]	ΔΔ [kg]
DL.275	1160	758	251	18	280	157	450	702	1,5	12,5

15-25-35T hydropneumatic jack

- Heavy duty construction.
- Long folding handle.
- 2 large wheels for better handling.
- Triple stage: 70 // 55 // 85.
- Air control on handle.
- Pivotal handle, 3 positions.
- Includes 2 adapters to increase lifting height.
- Compliant with EC standard EN 1494-ASME-PASE.

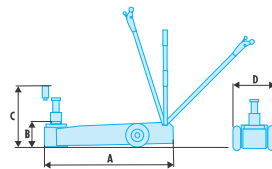
DL.1050	A [mm]	B [mm]	C [mm]	D [mm]	Oil Capacity [cm ³]	Tonnes [t]	ΔΔ [kg]
	686	151	361	333	1200	10 - 25 - 50	65



15-30T hydropneumatic jack

- Heavy duty construction.
- Long foldable handle.
- 2 large wheels for better handling.
- Double stage: 70 // 75.
- Air control on handle.
- Pivotal handle, 3 positions.
- Includes 2 adapters to increase lifting height and avoid contact with the chassis.
- Compliant with EC standard EN 1494-ASME-PASE.

DL.1530C	A [mm]	B [mm]	C [mm]	D [mm]	Oil Capacity [cm ³]	Tonnes [t]	ΔΔ [kg]
	538	151	296	289	1500	15 - 30	48



MOBILE LIFTING ACCESSORIES FOR HYDROPNEUMATIC JACKS

Bottle Jacks

Designed for heavy-duty professional use: the welded base provides enhanced strength to the jack, reducing risks of leaks.

Can be used for special applications:

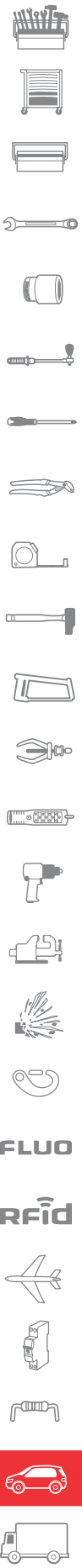
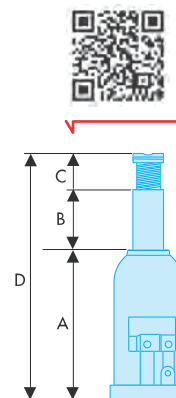
- The internal pump system allows for horizontal use as a pusher jack.
- CE



DL.BTI - Heavy duty series bottle jacks

- Capacity: 2t, 5t, 8t, 12t, 20t, 30t.
- Designed for heavy-duty professional use.
- Welded base plate jacks, control in the axis: Stronger, more stable, less leaks.
- Heat and surface treated pump shaft and actuator.
- Allows for horizontal use as a pusher jack.
- Complies with directive on machinery 2006/42/CE.

DL.2BTI	A [mm]	B [mm]	C [mm]	D [mm]	Oil Capacity [cm ³]	Tonnes [t]	ΔΔ [kg]
	178	177	52	317	0.7	2	2.4
DL.5BTI	198	122	70	390	15	5	3.7
DL.8BTI	198	124	72	394	20	8	5.6
DL.12BTI	238	160	80	468	37	12	8
DL.20BTI	270	160	-	430	62	20	13
DL.30BTI	280	165	-	440	83	30	18.4



AXLE STANDS

Pair of 3 t axle stands



- Load capacity: 3 t.
- Axle stands with rack and locking pins.
- 9 height settings from 247 to 300 mm.
- Pin chained to the stand.
- Reliable and sturdy construction
- 4-feet base with welded plates for enhanced stability and stiffness.



	H [mm]	Width I [mm]	L [mm]	ΔΔ [kg]
DL.C3	188	207	247	7.0

Pair of 6 t axle stands



- Load capacity: 6 t.
- Axle stands with rack and locking pins.
- 11 height settings from 400 to 620 mm.
- Pin chained to the stand.
- Reliable and sturdy construction.
- 4-feet base with welded plates for enhanced stability and stiffness.



	H [mm]	Width I [mm]	L [mm]	ΔΔ [kg]
DL.C6	250	285	400	14.00

Pair of 22 t axle stands



- Load capacity: 22 t.
- Axle stands with rack and locking axis.
- 4 height settings from 338 to 500 mm.
- Pin linked by wire with storage system.
- Reliable and sturdy construction.
- Square base with welded plates for enhanced stability and stiffness.



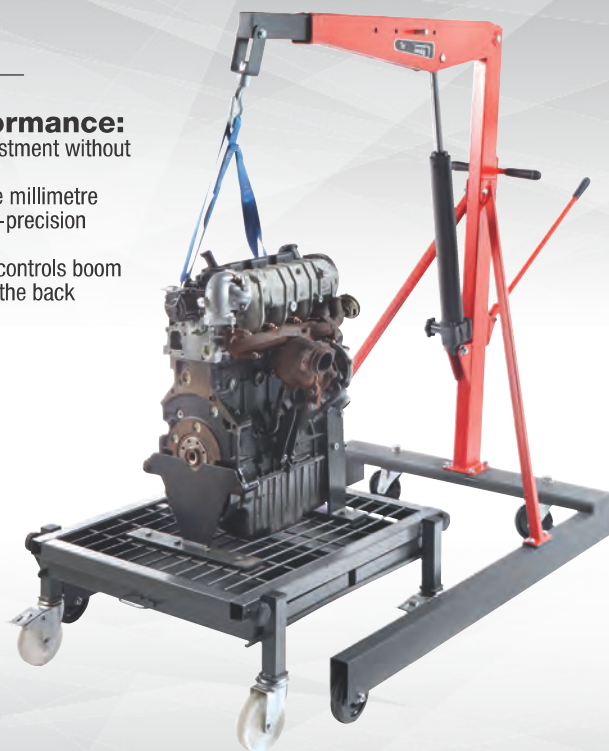
	H mini [mm]	Width I [mm]	L [mm]	ΔΔ [kg]
DL.PL22A	338	250	250	27.5

WORKSHOP CRANES

WORKSHOP CRANES

Exclusive performance:

- Easy boom length adjustment without tool nor pin.
- Load lowering with one millimetre accuracy with the high-precision control.
- Rotating jack at 270°: controls boom rising and lowering by the back or side of the crane.



1 t workshop crane

- 1 t folding workshop crane.
- Tool-free jib extension
- Rotating controller: 270°, double acting for quick lift.
- Easy use, pivoting rear wheels.
- Synthetic wheels for low rolling noise.
- Capacity: 1 t.
- 3 positions: 500, 750, 1000 kg.
- Dimensions open: 450 x 1520 x 978 mm.
- Floor dimensions: 1520 mm.
- Max height: 2500 mm.
- CE. Jack with anti-overload valve.



	H maxi [mm]	H mini [mm]	ΔΔ [kg]
DL.1GP	2500	147	80.0



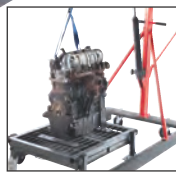
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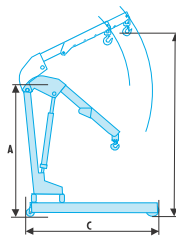


WORKSHOP CRANES

1 t europalette workshop crane



- 1 t folding workshop crane compatible with EU pallet.
- Tool-free jib extension.
- Easy use, pivoting rear wheels.
- Capacity: 1 t.
- 4 positions: 500, 670, 830.1000 kg.
- Max length from arm to hook: 1360 mm
- Width 838 mm, inside the forks
- Footprint: 1527 x 992 mm.
- Hook height: 128-2128 mm.
- Jack fitted with overload valve.
- CE Compliance Standard EN1494+A1.



	A [mm]	B [mm]	C [mm]	Tonnes [t]	$\Delta\Delta$ [kg]
DL.500EU	1613	2128	1527	1	86

LOAD BALANCERS

Device removal jack 500 kg



- Supplied with rubber pad, reversible fork and holes to pass a holding chain.
- Power: 500 kg.
- Min height: 1160 mm.
- Max height: 1960 mm.
- Floor footprint: 530 x 590 mm.
- EC compliant.



	H maxi [mm]	H mini [mm]	$\Delta\Delta$ [kg]
DL.50	1960	1160	32

■ **Lifting plate for 500 Kg jack**



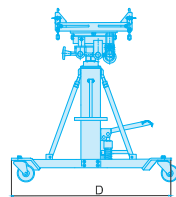
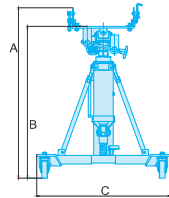
- This plate supports a block of high density foam that spreads the load over a large surface area and avoids damage to guards.
- Usable on product Ref DL.50.
- Dimensions with foam block (L. x W. x H.): 305 x 155 x 40 mm.
- Reference of the foam alone DL.20-02M

DL.50SUP	$\Delta\Delta$ [kg]
	4

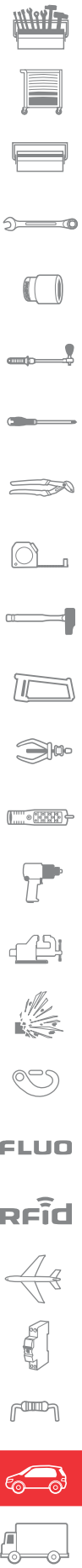
■ **Device removal jack 1000 kg**



- Max load 1 ton.
- Adjustable height:
 - Minimum 895 mm
 - Maximum 1820 mm
- Footprint (L. x W.): 790 x 945 mm.
- Castors including 2 with brakes.
- Head tilts in two axes with adjustment wheels and safety chains.
- Foot control: rising, lowering.
- Easy movement with the handling grip.
- CE compliance Standard EN1494+A1



DL.1000	A [mm]	B [mm]	C [mm]	D [mm]	Oil Capacity [cm ³]	Tonnes [t]	$\Delta\Delta$ [kg]
	1000	899	790	945	2570	1	80



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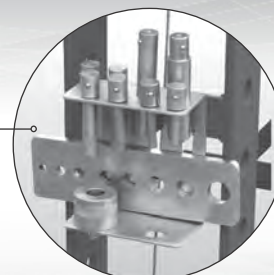


HYDRAULIC PRESSES

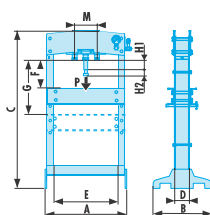
HYDRAULIC PRESSES

30t and 50t Workshop presses

- Table raised by a single operator using the integral winch (50t model).
- Integral pusher support.
- Jack mobile laterally.
- Supplied assembled with a pair of Vees.
- Piston with automatic return spring.
- Base allowing to move it using a pallet jack, ground anchorage.
- CE.



15 t hydraulic bench press

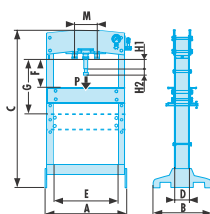
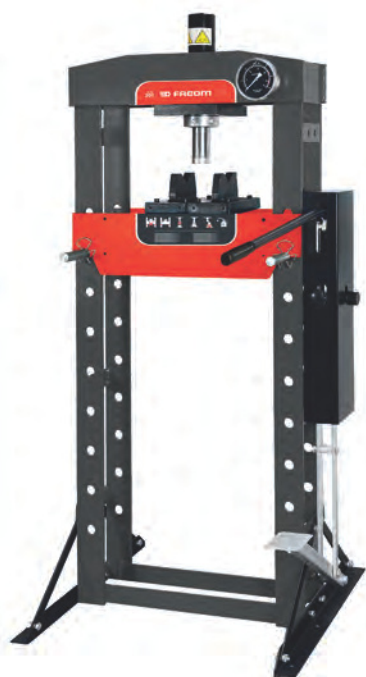


- Lateral adjustable jack.
- Eye-level pressure gauge.
- Piston with automatic return.
- Piston travel: 160 mm.
- Supplied fitted with pair of reversible V and set of pushers.
- CE Compliance Standard EN1494+A1.
- Floor dimensions: 700 x 540 mm.

	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Tonnes [t]	$\Delta\Delta$ [kg]
W.415WBA	700	540	882	965	500	15	75



20 t hydraulic press



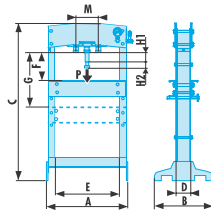
- Double pump for fast approach.
- Foot and hand control.
- Eye-level pressure gauge.
- Piston with automatic return.
- Piston travel: 185 mm.
- Supplied fitted with pair of reversible V and set of pushers.
- CE Compliance Standard EN1494A+.
- Floor dimensions: 730 x 560 mm.

	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Tonnes [t]	$\Delta\Delta$ [kg]
W.420	730	560	1519	1626	510	20	112

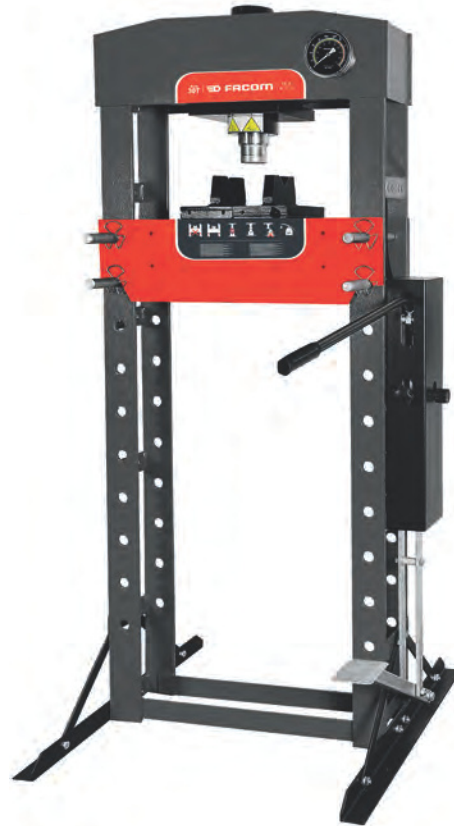


30 t hydraulic press

- Double pump for fast approach.
- Foot and hand control.
- Eye-level pressure gauge.
- Piston with automatic return.
- Piston travel: 150 mm.
- Supplied fitted with pair of reversible V and set of pushers.
- CE.EN1494A+
- Floor dimensions: 730 x 560 mm.

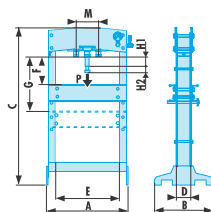


W.430	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Tonnes [t]	$\Delta\Delta$ [kg]
W.430	795	700	1773	1830	535	30	167



50 t hydraulic press

- Double pump for fast approach.
- Foot and hand control.
- Eye-level pressure gauge.
- Piston with automatic return.
- Piston travel: 200 mm.
- Supplied fitted with pair of reversible V and set of pushers.
- CE Compliance Standard EN1494A+.
- Floor dimensions: 730 x 560 mm.



W.450	A [mm]	B [mm]	C [mm]	d [mm]	E [mm]	Tonnes [t]	$\Delta\Delta$ [kg]
W.450	1030	800	1831	1877	730	50	300



HYDRAULIC PRESSES

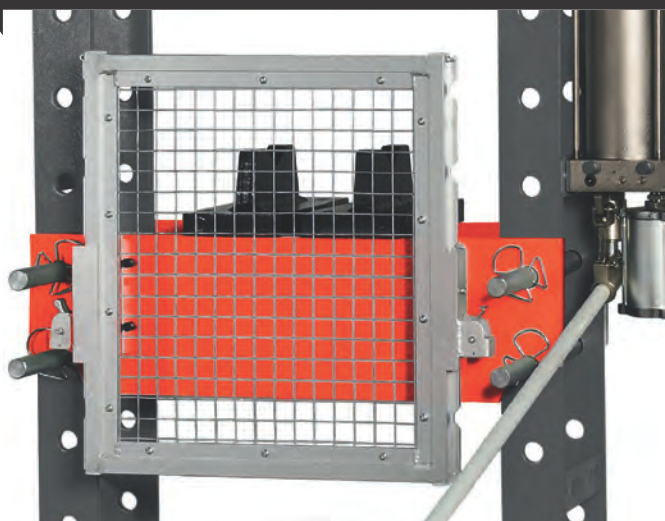
Set of 8 pushers 10 to 30 mm



- Diam.10 mm - length 50 mm - max load 2 t.
- Diam.12 mm - length 60 mm - max load 3 t.
- Diam. 16 mm - length 60 mm - max load 8 t.
- Diam.18 mm - length 85 mm - max load 12 t.
- Diam. 20 mm - length 85 mm - max load 14 t.
- Diam. 22 mm - length 85 mm - max load 16 t.
- Diam. 25 mm - length 110 mm - max load 18 t.
- Diam. 30 mm - length 110 mm - max load 20 t.

	$\Delta\Delta$ [kg]
W.PUNCHES-A	2.7

PROTECTION FOR WORKSHOP PRESSES



Flexibility


- Several height positions of the protection according to the part's size. Allows to position the protection flush with the part for large parts.
- Adapts to 20t, 30t and 50t workshop presses.

W.PROTECT20	For press 20t W.420
W.PROTECT30	For press 30t W.430
W.PROTECT50	For press 50t W.450

Press protector - multi-model



- Protections adaptable to new Facom models except model W.430MA and W 410WB , W.415WB .
- Protections compatible with older models:
 - Presses for W.PROTECT : W.430BO , W.430L , W.450MA.
 - Presses for W.PROTECT1 : W.430H , W.430ML , W.450HP , W.450PN.
- Easy installation . (Aluminum frame to put on the chassis).
- Easy opening closure (sliding protection with screw locking).
- Integrated handle to the " glass" by cutting.

	H [mm]	L [mm]	P [mm]	$\Delta\Delta$ [kg]
W.PROTECT	522	446	404	8,2
W.PROTECT1	522	570	404	8,0

INSPECTION CREEPERS

HEADLIGHT BEAM ADJUSTER

Simple and precise



Double laser aiming

- Upper laser line perpendicular to the vehicle.
- Single laser for centring on the insert.

Can be used on all types of vehicles and inserts

- For headlight inserts between 20 and 150 cm.
- Also suited to xenon, LED, halogen headlights.
- Also suited to Matrix headlights.
- Adjustment of low beam, high beam and fog lights.

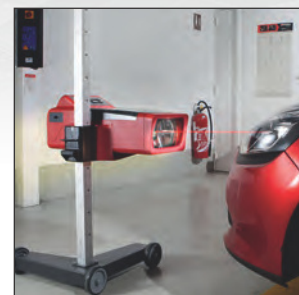
Built-in digital luxmetre

- Checks lighting intensity in low and high beam.



Rolling base

- Accurate side displacement from one insert to the other.



Vertical deviation adjustment

- According to the insert's height, up to - 4%.

Domed glass lens

- Clear and precise concentration of the light beam on the inside panel for fine adjustment.

Headlight beam adjuster

- Dual laser aiming headlight adjustment unit.
- Digital luxmeter, checks headlight and dim light intensity.
- CE certified, supplied with a certificate.
- Complies with the new standards for LED headlights.
- Adjustable level.
- Vertical deviation adjustable to -4%.
- Domed glass lens, clear and accurate concentration of the light beam.
- Column in extruded aluminium, lens length between 20 and 150 cm.



740A	$\Delta\Delta$ [kg]
	27



POWER TOOLS

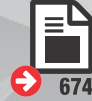


A comprehensive range suited to your needs



SPECIFIC BODYWORK LAMPS

Rechargeable light ramp - 779.UH



More Than one metre of power and constant light

- Engine compartment lamp to fasten under the hood.
- Can be placed under the vehicle dome light to light the cab

2 modes :

- NORMAL :**
1,000 lumen - 4h operating TIME.
- BOOST :**
2,000 lumen - 2h operating time.



248 SMD LEDs.

- Battery charge indicator.
 - Can be used with the cable or the battery.
 - Resists to chemicals.
- Dimensions: from 1,397 to 2,108 mm (extendable arms).



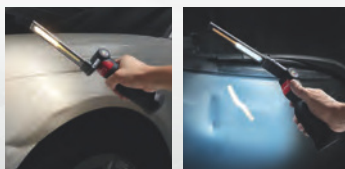
Wireless bodywork inspection lamp - 779.CML



Avoid colour errors!
Applications: paint, polish, operation



Magnet base with hook, swivel insert.



Zone preparation.

- 2 setting modes:**
- 4,500 K for light surfaces.
 - 6,500 K for dark surfaces.

500 lumen for 3 hours operating time

- CRI (Colour Rendering Index): 95.
- The higher the colour rendering index (CRI), the closer the light to natural light.
 - A high CRI is helpful in paint works and the identification of faults



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INSPECTION CREEPERS

■ Inspection creeper



- High density foam padded vinyl headrest resistant to automotive fluid.
- Frame made of ovoid-shape tube: no protruding angle to improve comfort and better wheel fastening.
- Maximum height: 100 mm.
- Max. chassis load: 150 kg.
- 6 wheels.

FACOM	Width l [mm]	L [mm]	ΔΔ [kg]
DTS.1B	630	1010	8.2

■ Estrado com rodas para inspeção - almofadado uso intensivo



- Adjustable headrest.
- Tool tray.
- High density foam padded vinyl headrest resistant to automotive fluid.
- Maximum height: 100 mm.
- Max. chassis load: 150 kg.
- 6 wheels.

FACOM	Width l [mm]	L [mm]	ΔΔ [kg]
DTS.2B	630	1010	10.0

■ Mid-height work seat



- Ideal for working on wheels, brakes and bodywork.
- High resistance shape memory thick PVC CUshion.
- High stability on 4 castors diameter 75 mm.
- Magnetised surface to receive screws and small components.
- Seat height: 395 mm.
- Dimensions (L. xW.): 385 x 385 mm.

FACOM	Width l [mm]	L [mm]	ΔΔ [kg]
DTS.4A	630	1010	5.5

Non-magnetic wing cover with suction fasteners

- Suction fastener system: non-scratch, quick-to-install.
- Each suction fastener can support 3 kg.
- Suitable for use with sheet metal, aluminium and composite materials.
- Adapts to all vehicle types.
- Cut-out provided for wheels.
- Easy maintenance.
- Impact and scratch resistant.
- High quality finish.



	$\Delta\Delta$ [g]
CR.D2	480

PRY BARS

Set of 3 pry bars

- Numerous uses: suspension, gear train, bodywork, etc.
- Sturdy blade minimising lever spring effect.
- Set comprising: D.3-7 - D.3-12 - D.3-18.
- Supplied in thermoformed tray.




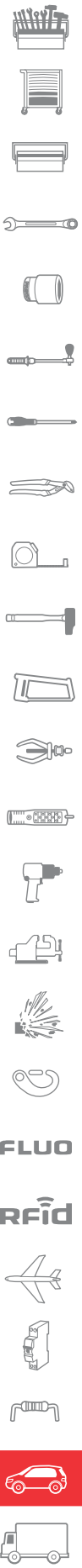
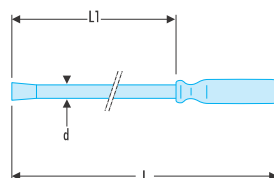
	H [mm]	Width I [mm]	L [mm]	$\Delta\Delta$ [kg]
D.3J3	40	145	670	1.7

D.3 - Pry bars

- Numerous uses: suspension, gear train, bodywork, etc.
- Sturdy blade minimising lever spring effect.

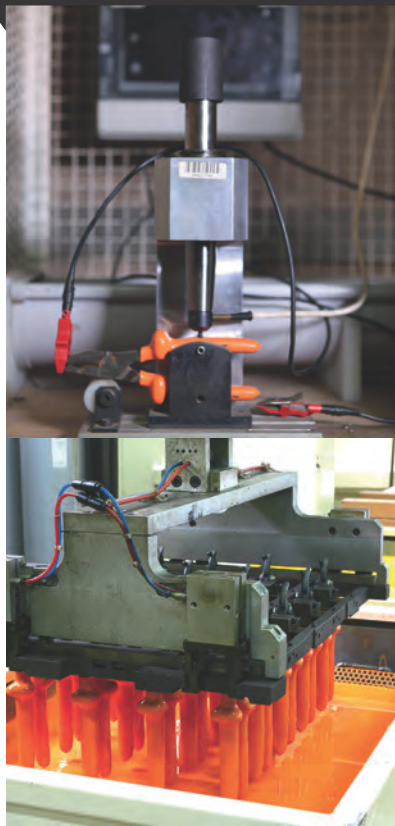


	d ["]	L [mm]	L1 [mm]	$\Delta\Delta$ [g]
D.3-7	3/8	292	165	275
D.3-12	3/8	422	305	345
D.3-18	1/2	635	460	810
D.3-24	1/2	787	610	1000
D.3-30	5/8	915	740	1700



CONSIGNING KITS

ELECTRIC VEHICLE: FACOM EXPERTISE



Facom, designer-manufacturer of 1,000 Volt tools

- Leveraging their expertise in designing and making professional tools, Facom offers a range of tools and equipment adapted to maintenance of electric-hybrid vehicles.

Safety and performance requirements.

- The particularities of electric-hybrid vehicles require specific tools and working in a 1,000 Volt environment requires observing particularly stringent safety measures.

Maintenance to be reinvented

- Design of vehicles, methods and requirements of maintenance of electric-hybrid vehicles clearly changes from habits taken in "combustion" engines. It is a whole new profession!

Facom's automotive know-how

- In France and globally, Facom is known for their in-depth knowledge of the specific requirements of automotive maintenance. Facom's know-how in 1,000 Volt tooling is the ideal partner for your "electric-hybrid" workshop.



■ **Toolkit for electric and hybrid vehicles**



- A 3/8" 1,000 Volt insulated ratchet-socket case, comprising:
 - 6 sockets: 8 - 10 - 11 - 12 - 13 - 14 mm.
 - 1 3/8" insulated T handle.
 - 2 insulated offset wrenches, dim. 10 - 12 mm.
 - 1 1,000 Volt insulated screwdriver for 5.5 x 125 flat-head screws and one 1,000 Volt Phillips® 2 x 125 head screws.
 - 1 pair of insulating gloves to EN 60903 and directive CE/89/686 category C, resistant to acid and ozone (size 10).
 - 1 pair of protection overgloves conformant to directive CE/89/686 (size 10).
 - 1 voltage absence tester conformant to NF EN 61010-600V cat 3 and IEC 61243-3 (VAT/DDT).
 - 1 neutral phase marking, continuity test, 30 mA differential circuit breaker test. Phase rotation indication.
 - Plastic case with padlock clasp (length: 650 mm).



	ΔΔ [kg]
CM.HYELPB	5.9

■ **Toolkit for PSA Ion and C-Zero vehicles**



- Including:
 - 1 1,000 Volt insulated 3/8" square drive socket.
 - 4 1,000 Volt insulated sockets: 10 - 11 - 12 - 13 mm.
 - 1 1,000 Volt insulated 3/8" extension.
 - 1 1,000 Volt insulated open end wrench.
 - 1 1,000 Volt insulated half-ROUND PLiers.
 - SET SUlted to Peugeot iOn and Citroën C-zero vehicles.



	ΔΔ [kg]
CM.ELPSA	1.35

SAFE

CONTROLLED MAINTENANCE OF ELECTRIC-HYBRID VEHICLES



New technologies: precautions required

- Regulations define that a vehicle is considered as being electric when featuring an electric network of over 49 Vac and/or 120 Vdc, such as 100% electric and hybrid vehicles, and most vehicles featuring the "Stop and Start" system.
- The UTE C 18-550 standard governs the conditions of accreditation for intervention on electric-hybrid vehicles:
 - Trained and accredited operators.
 - Protection equipment.
 - 1,000 Volt insulated tools to ensure safety.



BC.VSE - Safety overgloves



- Silicon coated leather gloves protecting from mechanical risks.
- Used to protect latex insulated gloves.
- Physical and mechanical grade as per standard EN 388: 2, 1, 2, 1.
 - Abrasion: 2.
 - Cuts: 1.
 - Tears: 2.
 - Perforation: 1.

BC	Size [mm]	ΔΔ [g]
BC.109VSE	9 (B)	160
BC.110VSE	10 (C)	160

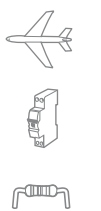
BC.VSE - Insulated gloves



- Natural latex gloves, AZM classification:
 - Resistance to acid: A.
 - Resistance to ozone: Z.
 - High mechanical strength: M.
- Length: 360 mm.
- Supplied in anti-UV opaque bag.

BC	E [mm]	Class	Size [mm]	Voltage/Volt
BC.80VSE	0,5	00	9 (B)	500
BC.81VSE	0,5	00	10 (C)	500
BC.90VSE	1,0	0	9 (B)	1000
BC.91VSE	1,0	0	10 (C)	1000

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SIGN POSTS AND CHAINS

▪ **Yellow and black marker posts**



- Marker posts.
- Double hook for plastic chains.

	H [mm]	ΔΔ [kg]
EV.BAP	910	4.4

▪ **Red and white marker posts**



- Marker posts.
- Double hook for plastic chains.

	H [mm]	ΔΔ [kg]
EV.BAP-RN	910	4.4

▪ **Safety zone marker chain - black and yellow links**



- Length: 25 m.
- Link diameter: 7.3 mm.

	ΔΔ [kg]
EV.CH	2.4

▪ **Safety zone marker chain - red and white links.**



- Length: 25 m.
- Link diameter: 7.3 mm.

	ΔΔ [kg]
EV.CH-RN	2.4

▪ **Safety posters**



- Warning post to be fitted to marker posts EV.BAP or EV.BAP-RN.
- Dimensions (L. x W.): 450 x 150 mm.

	ΔΔ [g]
EV.PP	268

CONSIGNING ROLLER CABINET

Support for 6 posts

- Support for 6 post markers to be fastened onto the FACOM JET + roller cabinet.



	$\Delta\Delta$ [kg]
EV.JET-SUP	16

Roller cabinet kit for electric vehicle work

- 6-drawer roller cabinet: JET.6M3.
- Support for 6 marker posts.
- Length of yellow and black plastic chains: 25 m.
- 6 marker posts.
- 1 warning sign.



	$\Delta\Delta$ [kg]
EV.JET-KIT	124



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DRAIN PLUG WRENCHES

OIL DRAINING : OIL DRAIN WRENCH AND MAGNETIC BITS

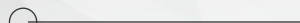
Simple and effective "Clean-hand" oil drain

D.48



Hinged wrench

- Power position for easy unlocking.
- Driver position for pre-unlocking and fast removal.
- Spring-assisted joint for constant retaining load. No risk of slipping.



Saves time

- Magnetised drain plug bits avoid drain plugs from falling and being lost in oil collection tanks.
- The complete work support positionable on the arms of the oil collectors ensures all accessories are handy during oil change operations.



Drain kit

- Including:
- Drain plug wrench D.48.
 - 15 magnetic bits.
 - General-purpose support tray.



General-purpose work support

- Support for storing all drain sockets and bits with the wrench.
- Easy fastening on oil collection containers or just laid on a worktop.

Fittings magnetic



Square bits:
8 and 10 mm.



6-point bits:
8, 10, 12, 13, 14 and 17 mm.



6-point sockets:
13, 14, 17, 18, 19 and 21 mm.



Torx®: T45



Handy

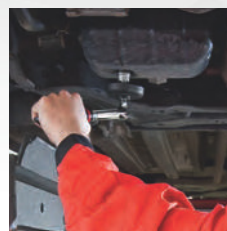
- Oil drain bits are removed easily with the 3/8" ejector drive.

Safer Cleaner

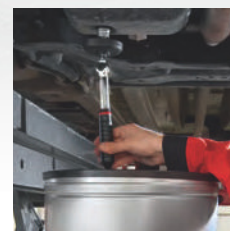
Protection cup

- No contact of hands with hydrocarbons.
- Eliminates risks of burns.
- Reduces wiping paper consumption in the workshop.

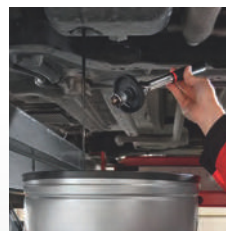
Video demonstration on your smartphone



1 Drain plug
unlocking in power position.



2 Drain plug
removal completed in driver position, oil drops are stopped by the protection cup.



3 Drain plug
dripping above the oil collector.



4 Bit ejector:
easy bit changing even when covered in oil, just push the protection cup.



DRAIN PLUG WRENCHES

Oil change kit

- Including:
 - 1 drain wrench: D.48.
 - Magnetic male square bits: 8 - 10 mm.
 - Magnetic female 6-point bits: 8 - 10 - 12 - 13 - 14 - 17 mm.
 - Magnetic female 6-point sockets: 13 - 14 - 17 - 18 - 19 - 21 mm.
 - Magnetic Torx® 45 bits.
 - Support for wrench D.48 and bits.



	$\Delta\Delta$ [kg]
D.48-KIT	1.410

Hinged oil drain wrench

- Oil drain wrench.
- 3/8" drive.
- Length: 280 mm.
- Oil drip cup: D.48-RC.



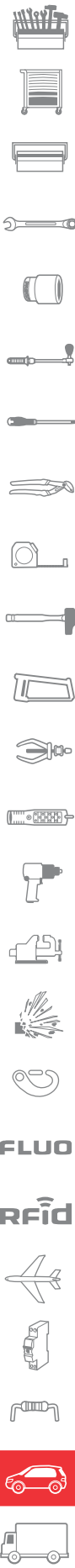
	L [mm]	$\Delta\Delta$ [g]
D.48	280	440

Oil collector

- Oil collector for gravity oil change.
- For use under an elevator bridge or in a pit.
- Tack capacity 80 L.
- Height adjustable from 1.14 m to 1.68 m.
- Broad steel collector. Ø 530 mm.
- Anti-projection grid.
- 4 orientable wheels.
- Level indicator.
- Tank draining by compressed air with safety valve.
- Drain plug for maintenance.



	$\Delta\Delta$ [kg]
OD.80G	33.8



DRAIN PLUG WRENCHES

■ Universal funnel



- Universal locking clamp fastens instead of motor oil filling plugs, drums, etc.
- Resists to hydrocarbons.
- For filling motor oil, coolant, etc.
- Height: 275 mm.
- Min clamp diameter: 34 mm.
- Max clamp diameter: 60 mm.

	H [mm]	ΔΔ [g]
D.M.UOF	275	242

■ Drain-plug wrench



- For composite drain plugs on VW, AUDI, SKODA, SEAT vehicles.
- For TFSI 1.2L 1.4L 1.8L 2.0L engines.
- Composite drive handle.
- Height: 95 mm.
- Handle width: 80 mm.

	H [mm]	ΔΔ [g]
D.1VAG-H	95	42

■ Drain plug bit



- For composite drain plugs on VW, AUDI, SKODA, SEAT vehicles.
- For TFSI 1.2L 1.4L 1.8L 2.0L engines.
- 3/8" and 17 mm female drive bits, 6-sided male bits.

	H [mm]	ΔΔ [g]
D.1VAG-B	34	26

■ Drain-plug wrench and bit set



- Comprising:
 - 1 wrench D.1VAG-H.
 - 1 drain-plug bit D.1VAG-B.

	ΔΔ [g]
D.1VAG	68

MAGNETIC OIL DRAIN PLUG BITS AND SOCKETS

Set of magnetic oil drain bits and sockets on rack

- Prevents drain plugs from falling in oil trays and collectors.
- Including:
 - Magnetic drain plug bits: MB.S08 - MB.S10 - MB.H08 - MB.H10 - MB.H12 - MB.H13 - MB.H14 - MB.H17 - MB.T45.
 - Magnetic drain plug sockets: MB.13 - MB.14 - MB.17 - MB.18 - MB.19 - MB.21.



Icon	$\Delta\Delta$ [g]
MB-J15	654

MAGNETIC OIL-DRAIN PLUG APPLICATION LIST

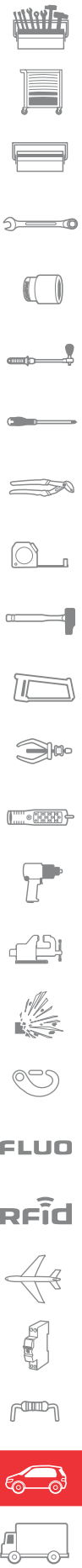
	MB.13	MB.14	MB.17	MB.18	MB.19	MB.21	MB.T45	MB.S08	MB.S10	MB.MH08	MB.MH10	MB.MH12	MB.MH13	MB.MH14	MB.MH17
PSA	•	•			•	•		•		•					
Renault	•	•							•						
Dacia								•							
VAG			•	•	•						•	•	•		•
Mercedes	•	•					•	•		•					•
MCC	•														
BMW			•							•					
Opel	•	•	•		•		•	•				•		•	
Mini	•	•								•					
Jaguar	•							•							
Rover			•		•	•									
Austin															
Land Rover															
Fiat	•		•	•	•		•				•	•	•		
Alfa Roméo		•	•	•						•		•	•		
Lancia				•	•						•	•			
Toyota	•	•						•		•					
Lexus		•								•					
Nissan	•	•	•		•	•		•		•					
Honda	•		•	•		•									
Suzuki	•		•	•	•								•		
Mitsubishi	•		•					•							
Kia			•		•										
Daewoo			•		•										
Hyundai			•					•							
Daihatsu		•													
Mazda	•		•		•			•							
Subaru			•			•									•
Ford	•	•	•		•	•		•	•	•	•	•		•	
Chevrolet			•												
Jeep	•														
Chrysler	•		•		•					•					
Volvo	•		•		•	•		•		•					
Saab	•				•										
Lada			•									•			

3/8" 6-point magnetic oil-drain sockets

- Prevents drain plugs from falling in oil trays and collectors.
- 3/8" drive bit.
- 6-point socket.



Icon	Hex Size [mm]	$\Delta\Delta$ [g]
MB.13	13	22
MB.14	14	23
MB.17	17	34
MB.18	18	42
MB.19	19	45
MB.21	21	49



MAGNETIC OIL DRAIN PLUG BITS AND SOCKETS

3/8" Torx® magnetic oil-drain key



- Prevents drain plugs from falling in oil trays and collectors.
- 3/8" drive bit.
- Torx® 45.

Part Number	Weight [g]
MB.T45	27

3/8" magnetic oil-drain key



- Prevents drain plugs from falling in oil trays and collectors.
- 3/8" drive bit.

Part Number	Weight [g]
MB.S08	30
MB.S10	34

3/8" magnetic oil-drain male hex bits



- Prevents drain plugs from falling in oil trays and collectors.
- 3/8" drive bit.

Part Number	Weight [g]
MB.H08	30
MB.H10	32
MB.H12	36
MB.H13	38
MB.H14	40
MB.H17	45

GEARBOX AND DIFFERENTIAL DRAIN PLUG BITS

3/8" oil-drain female square bit 10 mm.



- 3/8" square drive bit.
- Square: 10 mm.

Part Number	Weight [g]
D.106-10	40

GEARBOX AND DIFFERENTIAL DRAIN PLUG BITS

3/8" drain plug bit with male triangle

- 3/8" square drive bit.
- Square: 10 mm.



	$\Delta\Delta$ [g]
D.109-10	40

Drain plug bit with XZN pattern

- XZN pattern: diam. 16 mm.
- Drive 3/8".
- V.A.G. gearbox



	$\Delta\Delta$ [g]
D.120-16	40

OTHER DRAIN PLUG WRENCHES

Drain plug wrench for CITROËN, RENAULT, PEUGEOT engine

- Square bit: 8 x 10 mm.
- Length: 230 mm.
- Finish: chromed.



	$\Delta\Delta$ [g]
D.13A	230

Drain plug wrench for CITROËN, PEUGEOT engine

- Male square: 10 mm.



	$\Delta\Delta$ [g]
P.27B	270

Engine, gearbox and differential drain plug wrench

- For auto makers: ALFA ROMEO, FIAT, LANCIA.
- Male hex: 12 mm.



	$\Delta\Delta$ [g]
F.63C	280



OIL-FILTER WRENCHES

A SOLUTION FOR EACH TYPE OF FILTER



Cartridge filter:

- To remove cartridge filters, when space allows, strap wrenches are the easiest and fastest to use.
- When space is critical, use automatic or adjustable wrenches.



Removable filters with a composite bell - 6 point drive:

- To remove the bell, use a D.163-"size of 6-point" socket.
- With their specific design, sockets for composite oil filter bells allow to work in the most crowded environments, while preserving the composite bell from any damage.



Removable filters with a composite bell - other drives:

- To remove these oil filter bells, always use an adjustable wrench of the DE or DP series.
 - Their specifications and rigidity eliminate any risks of breakage of the composite bell.
 - Determine the reference of the adjustable wrench with the oil filter dimensions:
 - DE for notched filters, DP for pointed filters.
 - The first group of numbers is the filter diameter.
 - The second group of numbers is the number of points or notches.
- Example: DP.88-16 - adjustable wrench 88 mm, 16-point.

Fast oil-filter wrench



- Fast oil-filter wrench for cars.
- Max length: 290 mm (for filters diam.: 66 --> 106 mm).
- Ratchet effect increment: 5°.
- Spare strap U.46ACL06 for oil filter wrench.



U.46ACL

345

U.48 : AUTOMATIC OIL-FILTER WRENCH

Saves time: automatic, ratchet effect



Set



Position and release



Ratchet effect ensures quick tightening and loosening

No adjustment.

- Fits diameters 66 to 105 mm.
- Strap torque control for optimum ratchet effect.
- Universal torquing force regardless of the size of the filter.
- Available for HGV for 106 to 150 mm filters.



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OIL-FILTER WRENCHES

Automatic oil-filter wrench for cars



- For cars.
- For filters diam.: 66 --> 105 mm.
- Ratchet effect increment: 5°.
- Optimised automatic tightening.
- Spare strap U.48-2 for oil filter wrench.

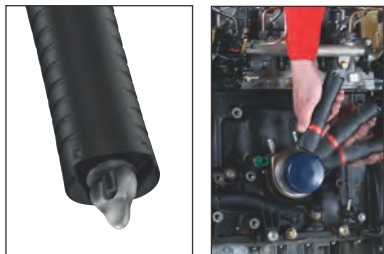


	$\Delta\Delta$ [g]
U.48	285

Automatic oil-filter wrench for HGV's



- For HGV's and farming vehicles.
- For filters diam.: 106 --> 145 mm.
- Ratchet effect increment: 5°.
- Optimised automatic tightening.
- Spare strap U.48-PL2 for oil filter wrench.



	$\Delta\Delta$ [g]
U.48PL	290

Multi-make oil change and filter module



- Compatible with the Facom modular storage system:
 - Compatible with CHRONO XL, CHRONO+, JETXL and JET+ roller cabinets.



	H [mm]	Width l [mm]	L [mm]	Contents	$\Delta\Delta$ [kg]
MOD.U48A	40	175	418	XL PL.399A	1.0

XL

OIL-FILTER WRENCHES

Adjustable oil-filter wrench for cars



- Automatic oil filter wrench for cars.
- Max length: 260 mm (for filters diam.: 65 --> 105 mm).
- Spare strap U.46-2A for oil filter wrench.

	ΔΔ [g]
U.46	310

Adjustable oil-filter wrench for HGV's



- Automatic oil filter wrench for HGV's and farming vehicles.
- For filters diam.: 105 --> 145 mm.
- Max length: 300 mm.
- Spare strap U.46APL2 for oil filter wrench.

	ΔΔ [g]
U.46PL	350

Chain wrench

- To remove oil filters when access is not possible with an oil-filter wrench.
- 1/2" drive bit.
- For oil filters: 50 --> 110 mm.



	ΔΔ [g]
D.149	280

Self-gripping oil-filter wrench for cars

- For cars.
- 3/8" drive bit.
- For oil filters: 65 --> 120 mm.



	ΔΔ [g]
D.151A	580

Self-gripping oil-filter wrench for HGV's

- For HGV's and farming vehicles.
- 1/2" drive bit.
- For oil filters diam.: 95 --> 165 mm.



	ΔΔ [kg]
D.151PL	1,345



OIL-FILTER WRENCHES

Automatic oil-filter wrench for PEUGEOT, CITROEN, FORD engine



- For Duratorq TDCI / HDI (DW10C) and 2.2 L Duratorq TDCI/ HDI (DW12C) Diesel engines for PEUGEOT, CITROËN and FORD, Diesel engine.
- 3/8" female square drive. 12-point ring 27 mm.
- For major time gain.



Part Number	Weight [g]
FW.D163-27	568

FW.P - Automatic oil-filter wrench for RENAULT engine



- Oil filters;
 - For 66 mm 6-notch.
 - For 76 mm 12-notch.
 - For 86 mm 18-notch.
 - For 96 mm 18-notch.
- Indispensable for RENAULT and DACIA vehicles.
- For petrol and diesel engines.



Part Number	d [mm]	Notches	Weight [g]
FW.P66-6	66	6	260
FW.P76-12	76	12	333
FW.P86-18	86	18	349
FW.P96-18	96	18	360

HDI gasoil filter tool



- For 2.0 l and 2.2 l HDI engines on Peugeot, CITROËN, VOLVO, FORD, MITSUBISHI.



Part Number	Weight [g]
DM.FR1	157

CAP WRENCHES AND SOCKETS

Cap wrenches with flats



- To be used when a strap wrench cannot be used.
- 3/8" square drive.

Ref	Filter [mm]	ΔΔ [g]
D.139	14-point Ø 65.0	135
D.140	14-point Ø 74.0	160
D.141	15-point Ø 92.0	205
D.159	14-point Ø 66.5	140
D.160	15-point Ø 74.0	160
D.161	15-point Ø 79.0	175
D.162	15-point Ø 89.0	200
D.164	8-point Ø 74.0	150

Notched cap wrenches



- To be used when a strap wrench cannot be used.
- 3/8" square drive.

Ref	Notches	Filter [mm]	ΔΔ [g]
D.154	6	66	200
D.155	12	76	225
D.156	18	86	268
D.157	18	96	295

Set of 6 composite cap wrenches

- Including:
 - Cap wrenches: D.163-24 - D.163-27 - D.163-30 - D.163-32 - D.163-36 - D.163-38.
 - Module PL.472.
 - Plastic case BP.102.



Ref	ΔΔ [kg]
D.163-J6	1,022

Composite cap wrench sockets

- Smaller shape and volume for better accessibility.
- 6-point profile for removal without damaging composite oil filter plugs.
- 3/8" drive.

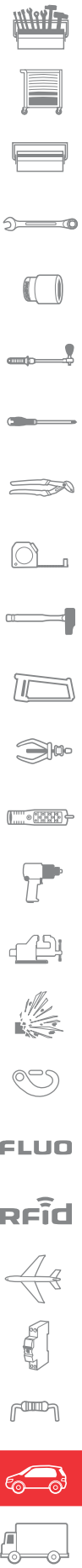
Ref	d [mm]	ΔΔ [g]
D.163-24	24	94
D.163-27	27	115
D.163-30	30	111
D.163-32	32	147
D.163-36	36	168
D.163-38	38	202



Composite cap wrenches with flats

- Special cap wrench to fit and remove composite notched oil filter plugs without damaging them.

Ref	Notches	Filter [mm]	ΔΔ [g]
DE.66-18	18	Ø 66	222
DE.96-18	18	Ø 99	286
DP.76-16	-	16-point Ø 75	220
DP.76-14	-	14-point Ø 76	218
DP.88-16	-	16-point Ø 88	244
DP.102-14	-	14-point Ø 102	274



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CAP WRENCHES AND SOCKETS

AUTOMATIC OIL-FILTER WRENCH

**Sturdy. Multi diameter.
Practical.**



- Single-hand positioning.
- Preserves the filter upon unscrewing.
- Self-tightening wrench: adjust automatically to filter size.
- Suited to all filters from 60 to 100 mm.
- Powerful torque (suited only to metal filters).
- Lifetime guarantee.

Operation



The wrench stay in the open position until it is fitted on the filter.



Automatic fastening on the filter at fitting (self-tightening wrench).

■ **Automatic cap wrench**



- Single hand positioning.
- Protects the filter when unscrewing.
- Self-tightening cap: automatic adjustment to filter size.
- Powerful torque (only for metal filters).
- Lifetime guarantee.
- For filters from 60 to 80 mm.



FACOM	ΔΔ [g]
C.48-1	388
C.48-2	208

CAP WRENCHES AND SOCKETS

■ Heavy Goods Cap Wrench

- Single hand positioning.
- Protects the filter when unscrewing.
- Self-tightening cap: automatic adjustment to filter size.
- Powerful torque (only for metal filters).
- Lifetime guarantee.
- For filters from 100 to 120 mm.



	$\Delta\Delta$ [g]
C.48-3	499

■ Set of 2 cap wrenches for L.V. / L.U.V.

- Set including:
 - C.48-1: for filters from 60 to 80 mm.
 - C.48-2: for filters from 80 to 100 mm.



	$\Delta\Delta$ [g]
C.48-J2	876

■ Oil filter cap wrench for 4-cylinder TOYOTA engines

- For 4-cylinder petrol or diesel engines from 1.8L to 2.0L.
- Indispensable to avoid damage to TOYOTA aluminium oil filter caps.
- Double drive 1/2" square and 28 mm male 6-pin.
- Forged for more strength.



	$\Delta\Delta$ [g]
DEPT.1	170

■ Oil filter cap wrench for 4-, 6- and 8-cylinder TOYOTA engines

- For 4-, 6- and 8-cylinder diesel engines.
- Indispensable to avoid damage to TOYOTA aluminium oil filter caps.
- Double drive 1/2" square and 28 mm male 6-pin.
- Forged for more strength.



	$\Delta\Delta$ [g]
DEPT.2	208



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SPARK PLUG WRENCH SELECTION GUIDE AND RECOMMENDED TORQUES



FACOM spark plugs comply with the ISO 11168 standard

This standard guarantees :

- Sufficient play to enable the plug to engage in the cylinder head without risk of cross-threading.
- The spark plug's angle of freedom must also be limited to avoid damaging the insulation.

A range for each application.

- 3/8" socket: the most compact sockets. Most comprehensive range, 14 mm multi-point spark plug sockets are available only in this range.
- 1/2" sockets: most widely-used range, but not suited to modern multivalve engines.
- Hinged wrenches: ideal for congested spaces. Use for high productivity. To be used when engine layout prevents the use of a torque wrench.
- Box wrenches: compact and lightweight, particularly suited to tool bags



Torque tightening of spark plugs

- Cylinder heads are made of aluminium alloy. The cylinder heads of modern engines are subjected to increasingly high stresses. Reduction of thread diameters. Therefore, spark plugs must always be torqued. The J.208-50 torque wrench is ideal for tightening spark plugs.

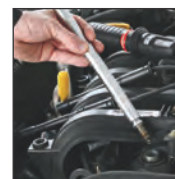
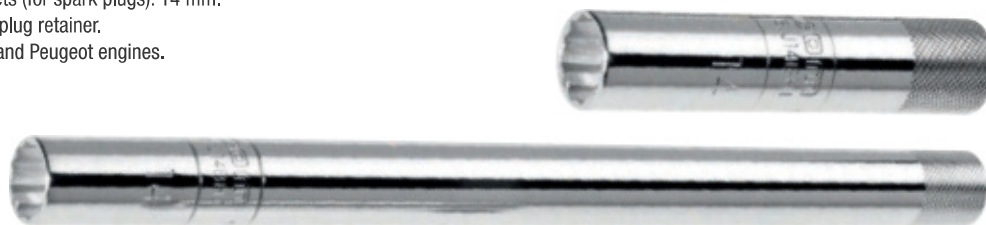
	Flat seating (with seals)			Conical seating	
Thread diameter (mm)	18	14	12	18	14
Cast-iron cylinder head (N.m)	35-45	25-35	15-25	20-30	15-25
Aluminium cylinder head (N.m)	35-40	25-30	15-20	20-30	10-20

- Values indicated for information only, always refer to manufacturer values.

3/8" SQUARE DRIVE SOCKETS

3/8" square drive sockets for 14 mm bi-hexagonal spark plugs

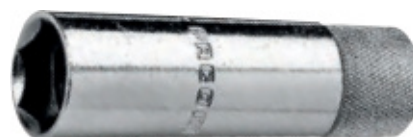
- Slim profile sockets (for spark plugs): 14 mm.
- Fitted with spark plug retainer.
- For new Renault and Peugeot engines.
- 3/8" drive.



⌘	d [mm]	L [mm]	ΔΔ [g]
B.J14BH1	14	90	90
B.J14BH2	14	250	245

3/8" square drive sockets for 16, 18 and 21 mm spark plugs

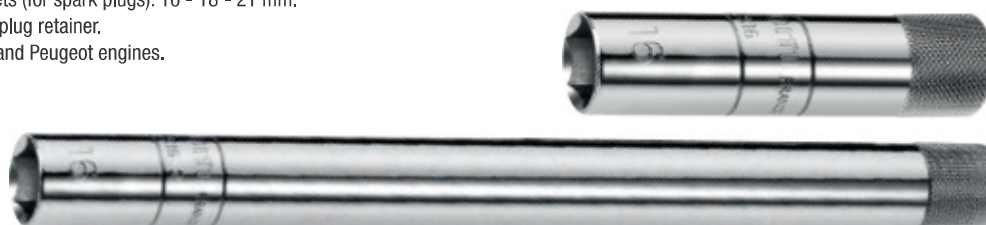
- Sockets with spark plug retainer.



⌘	d [mm]	L [mm]	ΔΔ [g]
B.J16A1	16	90	130
B.J16A2	16	250	350
B.J18A1	18	90	190
B.J21A1	21	90	200

1/2" square drive sockets for 16, 18 and 21 mm spark plugs

- Slim profile sockets (for spark plugs): 16 - 18 - 21 mm.
- Fitted with spark plug retainer.
- For new Renault and Peugeot engines.
- 3/8" drive.



⌘	d [mm]	L [mm]	ΔΔ [g]
B.S16A1	16	90	130
B.S16A2	16	250	350
B.S18A1	18	90	190
B.S21A2	21	250	650



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HINGED WRENCHES

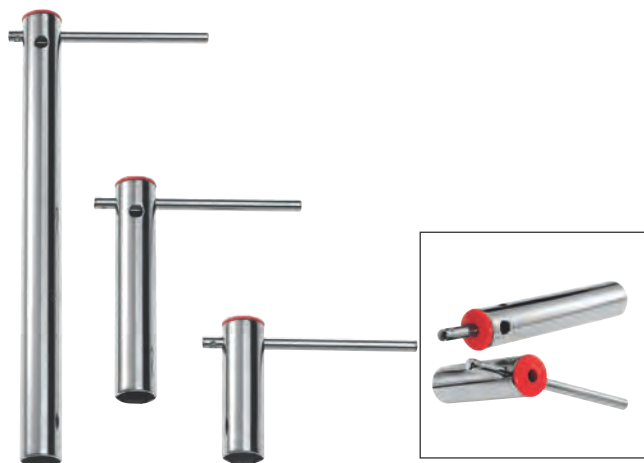
■ B.J - hinged wrenches for 16, 19 and 21 mm spark plugs



ED	L [mm]	L1 [mm]	L2 [mm]	ΔΔ [g]
B.J16R1B	270	90	175	340
B.J16R2B	517	90	175	500
B.J19R1B	270	90	175	600
B.J21R1B	270	90	220	600

BOX WRENCHES FOR SPARK PLUGS

■ Box wrenches for 16 and 21 mm spark plugs



NF ISO 11168, ISO 11168

- Models L and M feature spark plug retainers.
- Removable tee-bar gives working angle at 90°.
- Tee-bar storage within wrench body.

ED	d [mm]	Width l [mm]	L [mm]	ΔΔ [g]
L.16AM	22,0	160	160	235
L.16AL	22,0	300	300	395
L.21C	26,0	90	90	180
L.21M	26,0	160	160	280
L.21L	27,5	300	300	460

SPARK PLUG LEAD PLIERS

■ Spark plug lead pliers



- For disconnecting spark plug without harming leads.
- No damage to connectors.
- Dimensions (L. x W. x H.): 198 x 30 x 55 mm.

ED	H [mm]	Width l [mm]	L [mm]	ΔΔ [g]
DM.28	55	30	198	210

ROUND TIP METRIC THICKNESS GAUGES

Round tip metric feeler gauges

- Set of 19 feeler gauges (round tip): 4/100 --> 100/100 mm.
- Blade length: 90 mm.

	$\Delta\Delta$ [g]
804	60



Sharp tip metric feeler gauges

- Set of 19 feeler gauges (tapered tip): 4/100 --> 100/100 mm.
- Blade length: 90 mm.

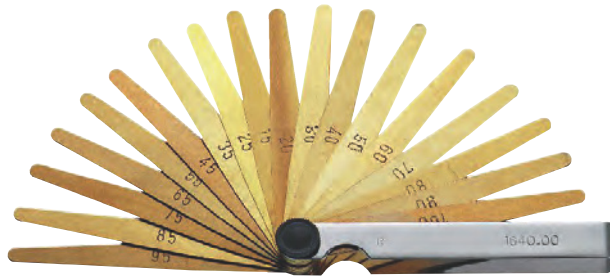
	$\Delta\Delta$ [g]
804.P	



Anti-magnetic metric feeler gauges

- Set of 19 feeler gauges (tapered tip): 10/100 --> 100/100 mm.
- Blade length: 100 mm.
- Brass blades.

	$\Delta\Delta$ [g]
804.AM	60



Round tip metric feeler gauges

- Set of 19 feeler gauges (round tip): 4/100 --> 25/100 mm.
- Blade length: 150 mm.

	$\Delta\Delta$ [g]
804.L	92



INCH THICKNESS GAUGES

Inch thickness gauges

- Set of 26 feeler gauges (tapered tip): 15/10000 --> 250/10000 inches.
- Blade length: 3" 1/2 (88.9 mm).

	$\Delta\Delta$ [g]
804.U	80



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SPARK PLUG ACCESSORIES

Flexible spark-plug fitter



- Helps engaging a spark plug thread in any location.
- For all types of spark plug.



	L [mm]	ΔΔ [g]
DM,20	316	50

Screw starter



- Helps engage a spark plug thread in any location, regardless of the screw head.
- Square drive: 6 --> 11 mm.
- Length: 305 mm.



	L [mm]	ΔΔ [g]
D,110	305	53

SPARK PLUG FILES

Contact file



- Thickness: 1 mm.



	L [mm]	ΔΔ [g]
276	130	10

COMPLETE SPARK PLUG MODULE

Complete spark plug module



- Compatible with the Facom modular storage system:
 - Compatible with CHRONO XL, CHRONO+, JETXL and JET+ roller cabinets.

Mod.	H [mm]	Width I [mm]	L [mm]	Contents	ΔΔ [kg]
MOD.BJ-GM	40	350	418	PL.661A	2.2

Spark plug service module



- Compatible with the Facom modular storage system:
 - Compatible with CHRONO XL, CHRONO+, JETXL and JET+ roller cabinets.

Mod.	H [mm]	Width I [mm]	L [mm]	Contents	ΔΔ [kg]
MOD.BJC	40	175	418	PL.669A	1.5

Spark plug service module



- Compatible with the Facom modular storage system:
 - Compatible with CHRONO XL, CHRONO+, JETXL and JET+ roller cabinets.

Mod.	H [mm]	Width I [mm]	L [mm]	Contents	ΔΔ [kg]
MOD.BSB	40	175	418	PL.668A	1.2

Glow plug module



- Compatible with the Facom modular storage system:
 - Compatible with CHRONO XL, CHRONO+, JETXL and JET+ roller cabinets.

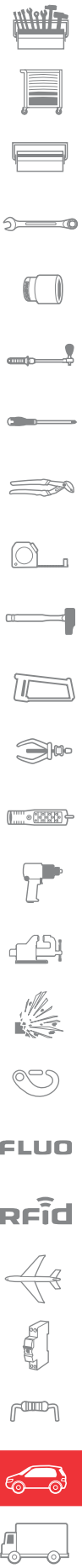
Mod.	H [mm]	Width I [mm]	L [mm]	Contents	ΔΔ [kg]
MOD.BRA	40	175	418	PL.667	0.910

GLOW PLUG WRENCHES

3/8" square drive hinged wrenches for glow plugs

- Flexible spark plug fitter.
- Universal joint with friction springs for reaching socket angle required.
- Drive bit 3/8".
- Finish: polished chromed.

Mod.	d [mm]	L [mm]	ΔΔ [g]
B.10R8D	12.0	176	114
B.10R9D	13.0	176	116
B.10R9L	13.0	177	125
B.10R12AL	17.0	178	142
B.10R12B	17.0	155	125



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GLOW PLUG TESTER

■ Glow plug tester



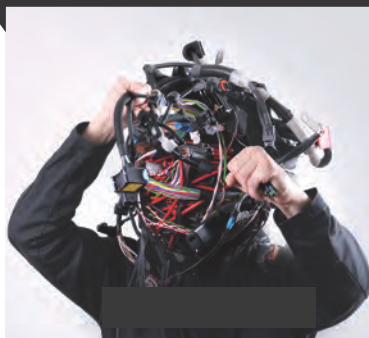
- To be used for glow plugs:
 - of all voltages.
 - in ceramic or metal.
- Power supply voltage from 11.8 volt to 13.6 volt.
- Voltage check between 3.5 and 12 volt.
- Easy LED readout.
- minimizes the risk of incorrect result interpretation.
- Optimized cable storage.



	$\Delta\Delta$ [g]
DX.10A	250

AUTO ELECTRICS

AUTOMOTIVE TESTER



The electricity is a headache to you?

AUTO Ω METER



Easy to use
easy to understand

- 3 Functions = 3 Buttons.
- Multicolor screen simplifying diagnostics and measures.

False contact detection

- Single and immediate function.
- Simple pressing of a button.
- Immediate diagnostic.

Designed for all workshops

- Special for 12V & 24V circuits.
- Long contact tips for improved access.
- Voltmeter and Ohmmeter functions.

3 year warranty


TESTERS AND MULTIMETERS

■ Automotive multimeter



- Automotive electrical tester, 100% automatic, 3-color screen for easy interpretation of values, Resistance to impacts.
- False contact detector.
- Voltmeter.
 - Measures DC voltages up to 49 Volts.
 - Automatic detection of MLI / PWM signals.
 - Line test: automatic checking of power supplies with false contact detection.
- Ohmmeter.
 - Measures resistance up to 40 M Ω .
 - Continuity alarm.
- Supplied with a pair of measurement cables, contact tips, "alligator" clips and a protection bag.



	Width I [mm]	L [mm]	P [mm]	$\Delta\Delta$ [g]
DX.V12	70	150	40	380

ELECTRICITY - HG

714 A : AUTOMOTIVE MULTIMETER



In automotive electricity, the multimeter is the indispensable complement to "diagnostic cases". In addition to typical measurement functions: Voltmeter, Ammeter, Ohmmeter, specialised functions have been added for checking vehicles:



Cyclic ratio:

- Test EGR valves, petrol injectors, turbocharger wastegates.

Measures internal resistance of batteries.

- Detect battery faults causing voltage fluctuations. In certain vehicles, these fluctuations cause malfunction in electronic equipment.

Large-size bargraph

- for Lambda probe test.

Tachometer and cam angle functions to tune older vehicles with non-electronic ignition systems. The 714A is class III 600V, for work on voltages of hybrid and electric vehicles. (Within currently enforced procedures and regulations).



Automotive multimeter



- Measures internal resistance of batteries.
- Automatic calibre.
- Voltmeter: AC / DC 0 --> 600 V.
- Ammeter: AC / DC 0 --> 400 mA.
- Ohmmeter: 0 0 --> 40 MO.
- Continuity and LED test.
- Temperature measurement.
- Cyclic ratio: 5% --> 99% .
- Cam angle.
- Tachometer.
- Frequency meter: 1 Hz --> 400 KHz.
- Compatible with clip-on ammeter Ref 711A.P500.

	$\Delta\Delta$ [g]
714A	1354

Megohmmeter and isolation tester



- Suited to hybrid and electric vehicles.
- Leak current detection.
- Protection cover included.
- Technical characteristics:
 - Isolation tester up to 4,000 Mohm at 250 V, 500 V, 1000 V.
 - AC / DC voltmeter: 0 to 600 V.
 - AC / DC ammeter: 0 to 400 mA.
 - Compatible with clip-on ammeters 711A.P500.
 - Ohmmeter: 0 to 40 MOhm.
 - Frequency meter, continuity tester, diode tester.

	$\Delta\Delta$ [g]
715	1100



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TESTERS AND MULTIMETERS

■ Infrared thermometer



- Provides non contact infrared temperature measurement with laser guide or by contact with K thermocouple (not supplied).
- Infrared: measurement -60°C --> +500°C.
- D/S ratio (distance/surface): 11/1.
- Emissivity: adjustable.
- Mode: Min Max Differential, instant.
- Thermocouple measurement performance change according to the K probe.



	$\Delta\Delta$ [g]
DX.T100	328

■ Automotive voltage tester



- Filter diameter: 3 to 48 V.
- LED + or - polarity indicator.
- Complete with prodding probe, cable probe for testing insulated leads, and alligator clip.



	H [mm]	Width I [mm]	L [mm]	$\Delta\Delta$ [g]
705	18	21	135	55

■ Diagnostic accessories



- Facilitates accessibility to connectors.
- For circuit up to 49 Volts.
- Comprising:
 - 1 nylon bag.
 - 2 measurement cables.
 - 2 needles.
 - 2 Pic probes.
 - 1 needle storage tube.



	$\Delta\Delta$ [g]
DX.SET	

■ Diagnostic accessories



- For automotive diagnostics requiring measuring on small connectors without damaging them.
- All these accessories can be used with an electric tester or a diagnostic device.
- Examples of use: Airbag circuit testing, checking of MAP circuits, temperature and throttle valve position, voltage or current measurement.
- For circuit up to 49 Volts.
- Comprising:
 - 36 male connectors: DX.CONECT-1.
 - 36 female connectors: DX.CONECT-2.
 - 8-piece accessories set: DX.CONECT-3.
 - 12-piece diagnostic accessories set: DX.CONECT-4.



	$\Delta\Delta$ [kg]
DX.CONECT	2,9

BATTERY CHARGERS

Fast charging, no need to disconnect the vehicle's battery during charging.



2 years

- 100% automatic.
- Charge all lead batteries: liquid, VLRA, AGM, GEL.
- Compatible with Start & Stop vehicles and batteries.
- Interface in 5 languages.
- Polarity reversing protection.
- Protection against incorrect voltage.
- Spark-free technology.
- 8-step smart charge program.
- Battery maintenance mode.
- Output voltage limited at 14.7 V.

VERSATILE 12 V



BC.126

- Nominal voltage: 12V
- Maximum output current: 6A

BUILT-IN SHOWROOM MODE



BC.1215

- Nominal voltage: 12V
- Maximum output current: 15A

VERSATILE 24 V

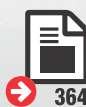


BC.2410

- Nominal voltage: 24V
- Maximum output current: 10A

Recharging accessories:

- Insulated pliers and ring wires (with fuse).



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BATTERY CHARGER

Fast battery charger 12 Volts 6 Amperes for LV, LCV and motorcycles



- Compatible with all "lead acid" batteries: VLRA, GEL, AGM, Liquid.
- For 12V batteries, from 6Ah to 130 Ah.
- Charging level indicator.
- "Wake-up" mode for batteries discharged to 0.2V.
- Multimode damage-free fast charging controlled by microchip.
- "Floating" mode to maintain batteries charged.
- Protections against short-circuits, reversed polarities, overloads.
- Compatible with "Stop & Start" batteries.
- Maximum output current 6A.
- Power supply: 220 - 240V, 50 - 60 Hz.
- Supplied with alligator clips and connection kit.

	$\Delta\Delta$ [kg]
BC126	1,3

Fast battery charger 12 Volts 15 Amperes for 12V LV, LCV, HGV. "SHOWROOM" mode



- Compatible with all "lead acid" batteries: VLRA, GEL, AGM, Liquid.
- For 12V batteries, from 10 Ah to 230 Ah.
- "SHOWROOM" mode to supply vehicles in showrooms.
- Charging level indicator.
- "Wake-up" mode for batteries discharged to 0.2V.
- Multimode damage-free fast charging controlled by microchip.
- "Floating" mode to maintain batteries charged.
- Protections against short-circuits, reversed polarities, overloads.
- Compatible with "Stop & Start" batteries.
- Maximum output current 15A.
- Power supply: 220 - 240V, 50 - 60 Hz.
- Supplied with alligator clips.

	$\Delta\Delta$ [kg]
BC1215	1,4

Fast battery charger 24 Volts 10 Amperes for HGV and worksite vehicles.



- Compatible with all "lead acid" batteries: VLRA, GEL, AGM, Liquid.
- For 24V batteries, from 20 Ah to 200 Ah.
- Charging level indicator.
- "Wake-up" mode for batteries discharged to 0.2V.
- Multimode damage-free fast charging controlled by microchip.
- "Floating" mode to maintain batteries charged.
- Protections against short-circuits, reversed polarities, overloads.
- Compatible with "Stop & Start" batteries.
- Maximum output current 10A.
- Power supply: 220 - 240V, 50 - 60 Hz.
- Supplied with alligator clips.

	$\Delta\Delta$ [g]
BC2410	

BOOSTER

12 Volt starting booster

- Starting booster.
- Operating voltage 12V.
- Capacity 20 Ah.
- Sealed internal AGM battery.
- Mac "Peak" current: 3500A.
- Max starting current: 1200A.
- TCFC: 620A.
- Double insulation copper cables 25 mm² 1.55 m long.
- Straight pliers 650A.
- Protection by 300A timed fuse.
- Analog charge control voltmeter.
- Cigar lighter protected by a 16A re-arming fuse.
- Automatic charger 2A.



FACOM	ΔΔ [kg]
B12.1B	11.7

Heavy duty 12 Volt starting booster

- Starting booster.
- Operating voltage 12V.
- Safety switch and reversed polarity alarm.
- Capacity 22 Ah.
- Sealed internal AGM battery.
- Mac "Peak" current: 3500A.
- Max starting current: 1300A.
- TCFC: 780A.
- Double insulation copper cables 25 mm² 1.55 m long.
- Straight pliers 650A.
- Protection by 300A timed fuse.
- Analog charge control voltmeter.
- Cigar lighter protected by a 16A re-arming fuse.
- Automatic charger 2A.



FACOM	ΔΔ [kg]
B12.SECU	11.7



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BOOSTER

12 Volt - 24 Volt starting booster



- Starting booster.
- Operating voltage 12V - 24V.
- Power safety and reversed polarity alarm.
- Voltage selection by power plug.
- Capacity 2 X 20 Ah.
- Sealed internal AGM battery.
- Mac "Peak" current: 3700A.
- Max starting current: 1400A.
- TCFC: 1000A.
- Double insulation copper cables 35 mm² 1.55 m long.
- Curved clamps 1000A.
- Protection by 300A timed fuse.
- Analog charge control voltmeter.
- Automatic charger 4A.

	ΔΔ [kg]
B124.1A	22.8

Heavy Duty 12 Volt - 24 Volt starting booster



- Starting booster.
- Operating voltage 12V - 24V.
- Power safety and reversed polarity alarm.
- Voltage selection by power plug.
- Auxiliary power plug. (For cables in option).
- Capacity 2 X 50 Ah.
- Sealed internal AGM battery.
- Mac "Peak" current: 7750A.
- Max starting current: 3200A.
- TCFC: 1700A.
- Double insulation copper cables 70 mm² 2.10 m long.
- Curved pliers 850A.
- Protection by 500A timed fuse.
- Analog charge control voltmeter.
- Automatic charger 7A.

	ΔΔ [kg]
B124.HD	76.7

Starting booster fuse



- Fuse for FACOM starting boosters.
- Packaged in 3 units.

	ΔΔ [kg]
BF300A	0,4
BF500A	0,4

UCB12A: "NO BATTERY" BOOSTER



BOOSTER

INFINIMAX TECHNOLOGY

No need to recharge or connect it!



12 VOLTS

ANY VEHICLES

4,7 KG

+50°C
-20°C

1



• Connect the booster to the vehicle's battery.

2



• Wait for 20 seconds.

3



• Start the vehicle.

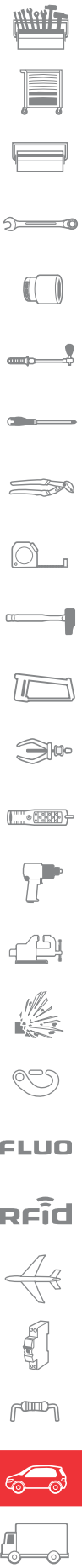
4



• Disconnect the booster.

Starting booster

- "Infinimax" technology, does not require recharging.
- For 12 V vehicles.
- Operating voltage: 9 V to 14.8 V.
- Max PEAK current: 4500 A certified by a UL Laboratory.
- Operating temperature: -20°C to +50°C.
- Cables: 75 cm Ø 5.6 mm copper.
- Clamps: 900 A bronze. Certified DIN 72553
- Length: 40 cm.
- Height: 20 cm.
- Width: 10.5 cm.
- Certified: CE.
- Guarantee: 5 years



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UCB12A	ΔΔ [kg]
	4,7

BOOSTER

■ OBD backup unit



- Backup unit to maintain the power supply voltage when changing a battery.
- Cigar lighter for supply via booster.
- 16-way EOBD compatible with all vehicles from 2000.
- Interface with power supply and good connections indicator.



	$\Delta\Delta$ [g]
B120BD.M	70

BATTERY TOOLS

■ 12V surge limiter



- Saves electronic power supply circuits even when vehicle battery discharged.
- 2 indicators for checking correct battery connection.
- Current limited to 5 amperes: maintains the same power supply in case of irregular consumption.
- Automatic circuit breaker in case of short-circuit.

	$\Delta\Delta$ [g]
DX.8-12A	150

■ 24V surge limiter



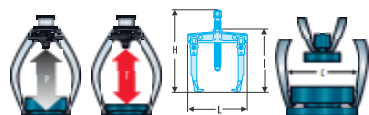
- For 24V vehicles.
- Protects electronic components in the vehicle.
- Cable length: 500 mm.

	H [mm]	Width I [mm]	P [mm]	$\Delta\Delta$ [g]
DX.8-24A	100	45	20	190

BATTERY TOOLS

■ Lug disconnecter

- Spring loaded, self-gripping 2-leg puller.
- Example of use = battery lugs.
- Slim puller arms.



	C mini - maxi [mm]	H [mm]	Width I [mm]	L [mm]	P maxi [mm]	Tonnes [t]	Screw Size	Screw Size [mm]	T [kN]	ΔΔ [g]
U.14A	10 - 35	125	75	60	40	0,5	U.14A04	Spindle	5	340



■ Reamer

- For cleaning contact surfaces on battery lugs and terminals.

	H [mm]	Width I [mm]	L [mm]	ΔΔ [g]
781	130	92	26	230



■ Battery filler

- Acid, oil and solvent resistant plastic.
- Length: 260 mm.
- Diameter: 70 mm.

	L [mm]	ΔΔ [g]
785	260	85



■ Acid hydrometer

- For checking specific gravity of battery fluid.
- Diameter: 42 --> 350 mm.

	ΔΔ [g]
784B	100



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BATTERY TOOLS

■ Battery tester with printer



- Battery tester 6 – 12 V.
- Charging circuit tester 12 – 24 V.
- Built-in printer.
- Replaceable clamps and cables.
- Compatible with Start and Stop vehicles.
- Compatible with "lead acid" batteries:
 - AGM.
 - EFB.
 - Liquid.
 - GEL.
 - VLRA.
- Cable length: 1.9 m.

	H [mm]	Width I [mm]	L [mm]	ΔΔ [g]
BAT.TEST	40	120	220	790

■ Refractometer 4 measurements



- Four measurement scales:
 - Adblue
 - Coolant
 - Battery acid
 - Washer
- Suited to Euro6 Diesel engines.
- Measures urea concentration of Adblue used.
- Correct, reliable and precise information.

	H [mm]	Width I [mm]	L [mm]	ΔΔ [g]
780B	70	235	700	472

FUSES AND CONNECTORS

DX.45 - CONTACT CLEANERS

Tweezers - diamond-coated needles



- Super abrasive.
- Restores the contacts promptly, eliminates oxidation.
- Facilitates diagnostics and repairs.
- Avoids useless component replacement.
- Reduces the use of chemicals.
- Effective on male and female flat connectors, and female round connectors.

Set of 3 diamond-tip contact cleaning tweezers

- Outside-inside diamond-coated nose to deoxidize male and female flat connectors.
- Width: 1.8 - 2.9 - 4.8 mm.
- Length: 114 mm.
- Set supplied in a pouch.



Icon	Weight [g]
DX.145TCJ3	70

Diamond-tip contact cleaning tweezers

- Outside-inside diamond-coated nose to deoxidize male and female flat connectors.
- 3 Width: 1.8 - 2.9 - 4.8 mm.
- Length: 114 mm.



Icon	Weight [g]
DX.145TCS	14
DX.145TCM	14
DX.145TCL	14

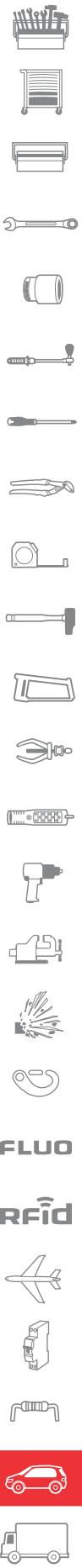


Set of 12 diamond-tip contact cleaning files

- Diamond-coated needle files to deoxidize female round connectors.
- Diameters: 0,75 X2 - 0,98 X2 - 1,29 - 1,48 - 1,76 - 2,03 - 2,26 - 2,52 - 2,78 - 3,02 mm.
- Set supplied in a pouch.



Icon	Weight [g]
DX.RDJ12	30



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FUSES AND CONNECTORS

Auto electricians kit



- For routine automotive electrical servicing and repair tasks: installation of accessories, car radios, trailer socket connections, fuse replacement etc.
- Contains:
 - The 12 most commonly used terminals for automotive applications (210 terminals).
 - 20x 5 dia. ring terminals for 0.5 to 1.5 mm².
 - 20x 4 dia. spade terminals for 0.5 to 1.5 mm².
 - 20x 5 dia. ring terminals for 1.5 to 2.5 mm².
 - 15x 6 dia. ring terminals for 1.5 to 2.5 mm².
 - 20x 4 dia. spade terminals for 1.5 to 2.5 mm².
 - 20x 6.3 mm dia. quick disconnects for 1.5 to 2.5 mm².
 - 15x 6.3 mm dia. combined quick disconnects for 1.5 to 2.5 mm².
 - 20x 6.3 mm dia. tab terminals for 1.5 to 2.5 mm².
 - 15x 8 dia. ring terminals for 3 to 6 mm².
 - 15 cable couplers for 0.5 to 1.5 mm².
 - 15 cable couplers for 1.5 to 2.5 mm².
 - 15 cable couplers for 3 to 6 mm².
 - 1 set of 20 fuses with extractor (5A to 30 A).
 - 1 fuse holder (for 5A to 30 A fuses).
 - 5 quick splice terminals for 0.5 to 1.5 mm².
 - 5 quick splice terminals for 1.5 to 3.5 mm².
 - 1 power fuse remover DX.9 (for 40A to 80A fuses) Ref DX.9: for easy replacement or removal of power fuses (e.g. for removing the fuse when working on airbags).
 - 1 pair of multi-purpose pliers 449I: for cutting wire from 0.5 to 6 mm² crimping colour-coded non-insulated terminals, cutting threaded rods from M 2.6 to M5, crimping non-insulated terminals, stripping.
- Supplied in a case.



	H [mm]	Width I [mm]	L [mm]	ΔΔ [kg]
449.Z1B	60	300	350	1.4

Maintenance crimping pliers for pre-insulated terminals



- CEI60352-2**
- Double crimping for pre-insulated terminals in compliance with the standard, with holding on the conductor core and the insulator.
 - Unlocking accessible at all times.
 - Reversed crimping: terminal positioned on the fixed part for more effectiveness and precision.
 - Stainless steel die with 3 cavities:
 - Red cavity: 0.5 --> 1.5 mm².
 - Blue cavity: 1.5 --> 2.5 mm².
 - Yellow cavity: 4 --> 6 mm².
 - Shape allowing hand setting.
 - Soft touch.



	L [mm]	ΔΔ [g]
985894	230	490

CAR RADIO

20-piece car radio removal tool set



- 20 special tools for the main makers of car radio (Alpine, Blaupunkt, Becker, Grundig, JVC, Pioneer, VDO).
- Multi-make: BMW, Fiat, Ford, Mercedes, Opel, PSA, Renault, VAG.
- Supplied in a plastic pouch showing applications.



	ΔΔ [g]
DX.25	176

ENGINE SUPPORT

Engine support

- Holds engines and gearboxes when one or several engine supports is removed.
- Capacity 400 kg.
- The support is fastened under the vehicle.
- Ideal for operations on distribution:



DM.UES	H [mm]	Width I [mm]	L [mm]	ΔΔ [kg]
DM.UES	30	630	1350	14.5

Engine support (1)

- Holds engines and gearboxes when one or several engine supports is removed.
- Capacity 500 kg.
- Needle bearings to facilitate tensioning.
- Pad spacing from 60 to 160 mm.
- Supplied with a set of chains and shackles.



DM.ES	ΔΔ [kg]
DM.ES	20

INLET AND TURBO PRESSURE

Manual pressure/vacuum pump

- Manual pressure/vacuum pump.
- To test air actuators such as EGR valves, turbo wastegate valves, boost inlet pressure measurement, pressure sensors, etc.
- Allows to bleed small hydraulic circuits, prime fuel circuits.


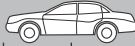

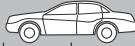


DA.160	ΔΔ [kg]
DA.160	2.2



APPLICATIONS GUIDE : DUMMY SPARK PLUGS - DUMMY INJECTORS



																	
	PSA	RENAULT DACIA	VAG	FORD	FIAT	 OPEL VAUXHALL	 BMW MINI	MERCEDES	VOLVO	ROVER	NISSAN	TOYOTA	HONDA	MAZDA	MITSUBISHI	SUZUKI	CHRYSLER
1,3D	-	-	911-V4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3CDTI/ JTD/ MULTIJET	-	-	-	911-81	911-81	911-81	-	-	-	-	-	-	-	-	-	-	-
1,4D/TD	-	-	911-V4	-	-	-	-	-	-	911-V10	-	-	-	-	-	-	-
1,4TDI/ TDCI/ HDI	911-82	-	911-102	911-182	-	-	-	-	-	-	-	911-82	-	-	-	-	-
1,5D/TD/ DCI	911-102	911-102	911-V5	-	-	911-107	-	911-105	-	-	911-102	-	-	-	-	911-102	-
1,6D/TD	-	-	911-V5	-	-	-	911-82	-	-	-	-	-	-	-	-	-	-
1,6TDCI/ HDI/CDI	911-88	-	-	911-88	-	-	-	-	-	-	-	-	-	-	-	-	-
1,7D/TD	-	-	-	-	911-V5	911-V5 / 911-V10 911-107	-	-	-	-	-	-	-	911-107	-	-	-
1,7DTI/ CDTI	-	-	-	-	-	911-110	-	-	-	-	-	-	-	-	-	-	-
1,8D/TD	-	-	911-V5	911-V5	-	-	911-105	-	-	911-V5 / 911-V10	-	-	911-V10	911-V5	-	-	-
1,9D	911-V4	911-V10	-	-	911-V5	-	-	-	-	-	-	-	-	-	-	911-V5	-
1,9D 64	-	-	911-V5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,9TD	911-V10	911-V10	-	-	911-V5 911-V10	-	-	-	911-V5	-	-	-	-	-	911-V10	-	-
1,9TDI 75/SDI	-	-	911-V5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,9TDI/ DTI	-	911-82	911-102	911-102	-	-	-	-	-	-	-	-	-	-	-	-	-
1,9DCI/ TDCI/ CDTI/ JTD	-	911-85	-	911-102	911-83	911-83	-	-	-	-	-	-	-	-	-	-	-
2,0D/TD	-	-	-	911-106	911-V5	-	-	-	-	-	911-V5	-	-	911-V10	-	-	-
2,0TDI 105/ DCI/DTI/ TDCI	-	911-106	911-102	911-88	-	911-105	-	-	-	-	-	-	-	-	-	-	-
2,0HDI	911-104 911-85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	911-104 911-85	-
2,0HDI 136/138/ JTD/CDI	911-88	-	-	-	911-104	-	-	911-105	-	-	-	-	-	-	-	-	-
2,1TD	911-V10	-	-	-	911-V10	-	-	-	-	-	-	-	-	-	-	-	-
2,2DT	-	911-V10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,2HDI/ CDI/DTI/ TDCI/ DCI	911-104 / 911-88	911-105	-	911-106	-	911-105	-	911-105	-	-	-	-	-	-	-	-	-
2,3D/TD	-	-	-	-	-	911-V5 / 911-V10	-	-	-	-	-	-	-	-	-	-	-
2,4D/TD	-	-	911-V5	-	911-V5	-	-	-	-	-	-	-	-	-	-	-	-
2,4JTD/ D5	-	-	-	-	911-91	-	-	-	-	911-82	-	-	-	-	-	-	-
2,5D	-	-	-	911-B5 / 911-B1	-	-	-	-	-	911-102	-	-	-	-	-	-	-
2,5TD/ TDI	-	-	911-104	911-V10	-	-	-	-	-	911-102	-	-	-	-	-	-	911-102
2,7TD/ HDI/CDI	911-88	-	-	-	-	-	-	911-105	-	-	911-107	-	-	-	-	-	-
3,0D/ CDTI	-	-	-	-	-	911-110	911-102	-	-	-	-	-	-	-	-	-	-
3,5D	-	-	-	-	-	-	911-102	-	-	-	-	-	-	-	-	-	-

HIGH-PRESSURE DUMMY GLOW PLUGS

■ Diesel dummy glow plugs 8 mm

- For testing diesel engine compression.
- For use with FACOM 911 reader.
- Fitted with a non-return valve.

Part Number	$\Delta\Delta$ [g]
911-81	38
911-82	38



■ Diesel dummy glow plugs 9 mm

- For testing diesel engine compression.
- For use with FACOM 911 reader.
- Fitted with a non-return valve.

Part Number	$\Delta\Delta$ [g]
911-91	45



■ Diesel dummy glow plugs 10 mm

- For testing diesel engine compression.
- For use with FACOM 911 reader.
- Fitted with a non-return valve.

Part Number	$\Delta\Delta$ [g]
911-102	58
911-104	40
911-105	85
911-106	57



HIGH-PRESSURE DUMMY INJECTORS

■ Dummy injectors

- For testing diesel engine compression.
- For use with FACOM 911 reader.
- Fitted with a non-return valve.

Part Number	$\Delta\Delta$ [g]
911-B2	184
911-B5	151
911-B8	327



■ Screw-on dummy injectors

- For testing diesel engine compression.
- For use with FACOM 911 reader.
- Fitted with a non-return valve.

Part Number	$\Delta\Delta$ [g]
911-V4	140
911-V5	164
911-V10	233



PRESSURE CONTROL

911 AND 912: COMPRESSION GAUGES



Compression testing is a pre-requisite for good engine diagnosis. With incorrect compressions, the engine cannot run normally. Electronic engine control and its self-diagnosis system will behave erratically if engine compressions are bad. More than ever, compression testing is the pre-requisite for good engine diagnosis.

Test sheet:

- Compression readings are printed on a ticket allowing simple and immediate comparison of all engine cylinders. This ticket is also used for diagnostics or return under guarantee.

Range of adaptors:

- FACOM offer a range of dummy spark plugs and dummy injectors for precise coverage of most vehicles. All these adaptors are fitted with check valves close to the engine combustion chamber and guarantee accurate measurements.



■ Diesel engine compression tester



- Test cards up to 12 cylinders.
- Integral starter-motor control.
- Suitable for all types of diesel engine: using dummy injectors and dummy heater plugs.
- Working range 5 to 60 bars.
- Including:
 - 912-01-02: Hose for 911 and 912.
 - 911TN: Bare diesel compression tester.
 - 911-82 - 911-102 - 911-104 - 911-105 - 911-B2 - 911-B5 - 911-B8 - 911-V4 - 911-V5 - 911-V10: Diesel dummy glow plug.
 - 911.C90: Angle adaptor.
 - 911B.FC: Pack of 100 test cards.
 - 911B.016: Starter-motor control lead.



	H [mm]	Width l [mm]	L [mm]	ΔΔ [kg]
911	85	340	430	2.0

■ Set of 100 test cards for diesel engine



- Accessory for diesel engine compression tester.



	ΔΔ [g]
911B.FC	104

▪ **Petrol engine compression tester**

- Test cards up to 12 cylinders.
- Integral starter-motor control.
- Working range 3 to 18 bars.
- Including:
 - 912-01-02: Hose for 911 and 912.
 - 912TN: Bare compression tester.
 - 912-12: Dummy petrol spark plugs 12 mm.
 - 912-14: Dummy petrol spark plugs 14 mm.
 - 912A.FC: Set of 100 test cards.
 - 911B.016: Starter-motor control lead.



912	H [mm]	Width I [mm]	L [mm]	ΔΔ [kg]
912	85	340	430	2.0

▪ **Flexible dummy spark plug 14 mm**

- Accessory for petrol engine compression tester.
- Flexible dummy spark plug 14 mm (spark plug size 16 mm).



912-14	ΔΔ [g]
912-14	141

▪ **Flexible dummy spark plug 12 mm**

- Accessory for petrol engine compression tester.
- Flexible dummy spark plug 12 mm (spark plug size 14 mm).



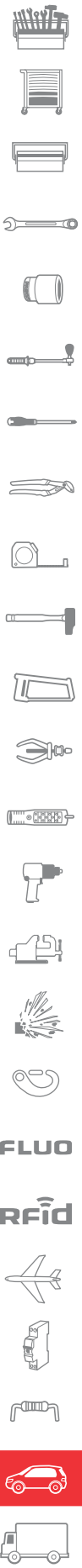
912-12	ΔΔ [g]
912-12	135

▪ **Flexible dummy spark plug 18 mm**

- Accessory for petrol engine compression tester.
- Flexible dummy spark plug 18 mm (spark plug size 18 and 21 mm).



912-18	ΔΔ [g]
912-18	163



PRESSURE CONTROL

Angle adaptor



- Accessory for diesel engine compression tester.



Part Number	Weight [g]
911-C90	72

Flexible fitting



- Accessory for petrol and diesel engine compression tester.
- Converts all older generations of 911 and 912 to make them compatible with the current "dummy spark plugs" and "dummy injectors" program.



Part Number	Weight [g]
912-01-02	50

Non-return valves



- Accessory for petrol and diesel engine compression tester.
- Compatible with all petrol and diesel dummy spark plugs and all dummy injectors.



Part Number	Weight [g]
911-VA	10

COMMON RAIL INJECTOR TOOLS

COMMON RAIL

- Most modern diesel engines use the common rail technology. To meet issues related with injectors, FACOM offer a comprehensive range for testing and extraction.
- Pressure constraints require perfect renovation of mating surfaces before refitting a new element, and changing gaskets at every removal.
- FACOM offer a range of tools to renovate mating surfaces and pull gaskets blocked at the bottom of injector wells.



■ DENSO injectors puller set

- For "Common Rail" diesel engines.
- For: Opel, Vauxhall, Renault, Nissan, Mazda, Toyota, Lexus.
- Supplied in plastic case with foam module.
- Instructions.



	Width I [mm]	L [mm]	P [mm]	ΔΔ [kg]
DCR.IP-DA	300	390	105	4.7

■ Common rail diesel injector return flow tester

- For 2 to 8 cylinder engines.
- 4 sets of 8 brass couplings for BOSCH and Siemens injectors.
- 1 set of 8 plastic couplings for DELPHI injectors.
- Supplied with universal connecting tubes.



	ΔΔ [kg]
DCR.IT	3.2



FLUO

RFid



COMMON RAIL INJECTOR TOOLS

Seized common rail injector slide hammer



- For more than 80% seized injectors.
- 4 Sockets for injector heads 25 - 27 - 29 - 30 mm.
- Tool for removing the inside mechanism for BOSCH injectors.
- Dual height slide hammer.
- Supplied with adaptors for BOSCH, SIEMENS, DELPHI injectors.

	$\Delta\Delta$ [kg]
DCR.IP	3.2

Seized common rail injector screw puller on PSA engines



- PSA 2.0L HDI 16V and 2.2L HDI 16V engines.
- Designed for use on "minivan" and utility vehicles when access does not allow to use the puller DCR.IP.

	$\Delta\Delta$ [kg]
DCR.IPPSA	15.4

Seized common rail injector screw puller on RENAULT engines



- RENAULT 2.2L DCI and 2.5L DCI engines.
- Designed for use on "minivan" and utility vehicles when access does not allow to use the puller DCR.IP.

	$\Delta\Delta$ [kg]
DCR.IPREN	15.8

PSA and RENAULT common rail injectors puller set



- Comprises the elements and covers vehicles of the DCR, IP-PSA and DCR.IP-REN pullers.

	$\Delta\Delta$ [kg]
DCR.IPM	19.1

Injector gaskets slide hammer

- To pull injector gaskets blocked at the bottom of the injector well.
- Avoids cylinder head removal.



Icon	Weight [kg]
DCR.SR	1.630

Multiple-make electrode puller set

- For glow plugs.
- Indispensable for Renault, Peugeot, Citroën, Fiat, Volkswagen vehicles.
- For plugs size 8, 9 and 10 mm.
- Supplied in plastic case with foam module.
- Instructions.



Icon	H [mm]	L [mm]	P [mm]	Weight [g]
DCR.HR-EU	75	320	265	980

Injector well cleaning set

- For all COMMON RAIL diesel engines.
- To clean injector wells and parting surfaces.
- To be used with a bolter or drill.
- 2 x cylindrical brushes, 20 mm and 25 mm, for cleaning the wells.
- 2 x brushes (Nylon and brass) for parting surfaces.
- Patch to surface parting surfaces.
- Protection caps to avoid contaminating engine cylinders.
- Adapters and extensions.



Icon	Weight [g]
DCR.ICA	500

